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ABSTRACT

To meet the needs of a totally integrated system in which students achieve at drastically different levels, Chapel Hill City Schools developed a 3-year plan to improve the ability of teachers to develop individualized instructional materials. In the first year of the program (1969-70) a teacher education staff was organized and employed to carry out a comprehensive pre- and inservice teacher education program. Strategies consisted of 1) a system-wide, 2-week summer workshop on individualized instruction (65 percent of the 250 teachers participating); 2) released time for teachers to develop materials for individualized instruction approximately 14 half days for each elementary teacher, less for secondary; 3) mid-year evaluation survey which resulted in changes of strategy for the second level and in a series of 4-day, grade level, systems-wide workshops for elementary teachers for more assistance in individualized reading instruction; 4) concentration on model programs at the secondary level: tutorial reading clinic utilizing community volunteers, and independent study and small-group work plans; 5) workshops to instruct teachers in the techniques of creative dramatics. In one year the project was able to noticeably alter the educational philosophy of the system and to make teachers more aware of individual needs. Teachers are now using more diversified media and techniques to make instruction more appropriate. (JS)

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THE TRAINING OF EDUCATIONAL PERSONNEL FOR CREATIVE TEACHING

July 1970 to June 1971

Dr. Paul N. Prichard
Director, EPDA
Chapel Hill City Schools
400 School Lane
Chapel Hill, North Carolina 27514

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I. Introduction

A. Educational Need

The Chapel Hill City Schools is made up of a student population which comes from widely divergent backgrounds. The schools are totally integrated due to a geographical zoning plan which was initiated in September 1967. The percentage of Negro students in each school ranges from 27 to 32 per cent. Although we feel that integration is morally, legally, and educationally right, it has caused a more heterogeneous group of students. A large proportion of the Negro students could be described as economically disadvantaged. At the other extreme, the majority of the white students come from the "academic" community since their parents are connected with one of the universities in the community.

According to recent studies conducted within the Chapel Hill City School System, we know that our students often achieve at drastically different levels. Our experience from working with students in desegregated classrooms has made it quite clear that many of our old teaching methods and materials aimed at the average middle-class white student must be reevaluated. It is also clear that the educational needs of all our students cannot be met by a single uniform program of instruction.

Faced with this dilemma, the Chapel Hill City Schools developed a three year plan to train teachers and develop educational media. By combining the resources of several agencies at the local, state, and federal level, considerable progress was made. Under the EPDA program for 1969-70 a teacher education staff was organized and employed to carry out a very comprehensive pre-service and in-service teacher education program. Along with this teacher education program the philosophy of the school system was revised to include individualized and personalized learning as our basic theme.

B. Specific Objectives

The primary objective of the program will be to improve the ability of teachers to develop individualized instructional materials as evidenced by increased involvement and achievement of students.

Specific objectives include the following:

1. That the participating teachers become familiar with outstanding books and articles concerned with creative, productive, and evaluative thinking.
2. That teachers will improve in their ability to think divergently as evidenced by an increase of creative responses to given ideas and things and the eventual increase of modified or original instructional materials designed for individualized instruction.
3. That teachers might become more effective in the utilization of diagnostic processes in order to better prescribe appropriate instructional methods and materials.
4. That teachers might become more effective in the utilization of available materials and media to better

individualize instruction.

5. That teachers might have the experience of developing curriculum materials and processes which are appropriate to their students.
6. That teachers might become more effective in expressing desirable educational goals in the form of desirable behavioral objectives.
7. That teachers might have an opportunity to investigate new methods and procedures in an effort to improve instructional practices.
8. A model for effecting change will be refined.

II. Operation of the Program

A. Planning

The planning for this program actually began three years ago when a curriculum committee consisting of teachers and administrators throughout the system was organized by the Assistant Superintendent of Curriculum and Instruction. Through regular meetings it became apparent that teachers were becoming frustrated with attempts to teach children who were so divergent in background and achievement. Possible solutions were discussed and individualized instruction seemed to show the greatest promise in meeting individual student needs. It was decided that ways should be found to allow teachers more time to plan and investigate more creative teaching methods. This was made possible by the EPDA grant.

A teacher education staff was formed and given the responsibility of planning and instituting a program which would train teachers for desired goals. The teacher education staff conferred with teachers, administrators, community members and consultants to develop a three year strategy. A staff of part-time teachers was used to relieve regular classroom teachers so that the classroom teacher could have time during the school day to attend workshops, visit other classrooms, study current literature about individualized instruction, produce materials for classroom use, and plan class activities.

Joint sessions between the teachers and the teacher education staff were quite beneficial in the planning of the year's activities. Through regular communication and evaluation the program could better meet the teacher needs.

The teacher education staff met regularly to plan and evaluate the program. This interaction between the staff was very positive. Brainstorming sessions proved to be quite helpful in developing a more creative program. There were also regular planning sessions with the supervisory staff of the superintendent's office so that a joint effort could be made in assisting and supporting teachers in their efforts to individualize instruction.

We found that regular planning sessions were quite valuable and necessary. Next year, 1970-71, our funds will be more limited for releasing classroom teachers, but we intend to use summer workshops and after school sessions. The teacher education staff and supervisory staff will continue to meet regularly.

B. Participants

This program is a system-wide effort to assist all teachers in developing new techniques to better meet student needs. The two-week summer workshop held in August 1969 was offered for all teachers in the system. Approximately sixty per cent of the teachers and administrators did attend. In addition, all teachers who taught academic subjects received some released time during the school year. It was felt that, since the entire school system had been committed toward better meeting student needs, all teachers should be given the opportunity to participate. It is still believed that total participation was necessary during the first year.

In the future our efforts will be more concentrated on model classrooms and training the leaders of each school. There will be a branching effect as these leaders work with other staff members within their individual school. We found this year that a teacher who is successful with individualized instruction can have a positive effect on his colleagues. Teachers want to see the program in action.

C. Staff

The permanent teacher education staff was one of the strongest parts of this program. The director and two program specialists had experience in the school system. The EPDA staff had good knowledge of the system, was known and respected by school staffs, and was highly motivated. The full-time staff member in each elementary school had experience in that school and was chosen as the most capable and respected member of that faculty. The hiring of a talented and respected staff contributed much to the acceptance of the program and to its successes.

Several consultants were used throughout the year. The most favorable response was often toward teachers who had successful individualized instruction programs in operation. These teachers seemed to "talk the same language" as our teachers and got down to the basics. On some occasions college teachers were felt to be too idealistic and too general. One effective procedure was to organize small group discussions which were teacher-lead.

With 260 teachers in this system it would have been desirable to have had a larger staff to help individual teachers on a one-to-one basis. However, we did try to utilize the existing leadership structure by working with principals, grade chairmen, and department heads. Support from these leaders in the individual school is essential for any change to take place.

D. Orientation

Our major orientation for this program occurred during the summer workshop. At this time teachers studied and were instructed about various techniques of individualized instruction. At the pre-school orientation all educators in the school system were advised of the plans for emphasizing individualized instruction system-wide. They were advised of the resources available and were urged to utilize them fully.

The part-time enrichment teachers who were used to relieve regular classroom teachers were given a two-week orientation before going into classrooms. This time was essential to instruct and prepare them to be more effective in the wide range of classrooms. We found that other sessions were necessary during the school year to maintain adequate morale. It was found to be extremely difficult for teachers to function in the many classrooms over a long period of time.

E. Program Operation

Objective 1--Reading outstanding books and articles

One of our prime objectives for this first year of the program was to help teachers become familiar with the many aspects of individualized instruction. In addition to instructing them individually and in workshops, we encouraged teachers to read outstanding books and articles. According to our survey (see Appendix A,B) the majority of the teachers did some professional reading. The staff helped promote reading by publishing bibliographies of available books and recommending reading to meet individual teacher interests.

Approximately 325 professional books were purchased for inclusion in the library at the central office. Bibliographies were distributed to each teacher. Of the 133 teachers polled, 115 indicated that they had read professional literature, 18 had not. The maximum number read was 20, minimum 1, with a mean of 5. Summaries of pertinent readings were distributed to the professional personnel.

Objective 2--More creative instruction

Many teachers in the elementary classrooms modified their original materials and techniques toward a more individualized approach. In most cases they utilized their release time wisely and accomplished much. The teacher education staff found that most teachers needed help in similar areas and, therefore, the decision was made to hold a series of reading workshops for teachers at each grade level. These grade level workshops were held in the early spring. At this time teachers had taken time to study and try some new techniques. Consequently, when we held the workshop they were quite receptive and wanted to share ideas with other teachers of the same grade level who were experiencing similar problems. These grade level workshops took place over four consecutive mornings and were felt to be quite successful in clearing up apprehensions and giving direction for future efforts.

At the secondary level the teachers did not seem to be as receptive to the individualized instruction concept. The high school math department tried using some learning activity packages (LAP's), but found that they could not write LAP's fast enough to keep ahead of the students. At mid-year they decided to abandon the idea and wait until they could prepare LAP's for the entire year. Math teachers at one junior high prepared LAP's in lesser detail for a fewer number of students and felt that they were quite successful.

Another problem at the secondary level arose when several teachers allowed students to work on independent study without proper parameters. The result was confusion and wasted time for students. The number of students on independent study at the high school increased to the point that the librarians were having problems controlling it.

After evaluating the first semester program, the decision was made to alter the program at the secondary level. Our part-time staff was reassigned. We placed one person in each library to work with students on independent study. The teacher assigned to work with independent study was to structure the students' activities by working out a contract with the student and his classroom teacher. Independent study worked much more satisfactorily following the controls.

Five of the other staff members were assigned to work with students who were having reading problems. Reading materials already in the system were pulled together and reading clinics were formed. A plea was also made for townspeople to volunteer to help with the tutoring. Over sixty volunteers were trained and worked at least an hour per day in the reading clinic. The staff members were very enthusiastic about student progress and felt good about the program. The school system hopes to continue the reading tutorial program next year with local funds.

Objective 3--The utilization of diagnostic process

The number of commercial and teacher-produced diagnostic tests increased considerably during this school year in all elementary schools. Considerable emphasis was placed on diagnostic procedures during the summer workshop. This was followed up by purchasing many commercial tests, reproducing some of the better teacher-made tests, and placing them in the appropriate school.

Objective 4--More effective utilization of materials and media

Our observations in the schools and conversations with teachers indicated that more media was being utilized. Another indication that teachers were more aware of media was the fact that teachers began asking for many more commercial types of media than during previous years.

During the Individualized Instruction Workshop 1969, time was allocated for introduction to the use and development of appropriate media.

In the model reading program at the secondary level, teachers were cognizant of the tutors' selection and use of appropriate materials for the remediation of reading problems.

Objective 5--Experience in developing curriculum materials and processes

Teachers used released time to develop a variety of materials for classroom use. Many more expendable materials, such as paper, were used throughout the school system than ever before. Many teachers learned how to use simulation and other learning games.

With an increased emphasis on media development, there was a demand by teachers for instruction in this area. Arrangements were made through the State Department of Public Instruction to hold a college credit course at the University of North Carolina. The three semester hour course, Audio Visual Instruction, taught by Dr. Ralph Wileman, was offered tuition-free to school employees. Thirty teachers participated in this class. The regular course outline was altered to meet the system's needs and placed emphasis on media development for individualised instruction. Each teacher had to develop a media supported lesson and then test it on a group of students to determine its effectiveness.

Objective 6--Expressing goals in form of behavioral objectives

During the Individualized Instruction Workshop 1969, two consultants from the University of North Carolina expressed the importance of stating objectives in behavioral terms. This was a technique that was extremely difficult for many teachers. Teachers who participated in the college credit course on media development also gained experience in this technique by developing objectives for the lessons they developed. Our teachers still need more experience in this area. It will receive emphasis in our curriculum guide development workshop during the summer of 1970.

Objective 7--Investigate new methods and materials

By making site visits to other schools and by the use of consultants, teachers have the opportunity to investigate many new methods and materials. Ninety-three teachers were involved in visits to demonstration schools located in the area (Marvin Smith, Burlington, N. C.; Saxapahaw, Saxapahaw, N. C.; E.I.P.

Southside, Durham, N. C.; UNC Reading Center, Chapel Hill, N. C.; Pinecrest, Southern Pines, N. C.; Louisburg Reading Center, Louisburg, N. C.). Staff members participated in Conference for Early Childhood Education, New Orleans, La.; Intermediate Science Curriculum Study, Washington, D. C.; California Testing Bureau Demonstration, Greensboro, N. C.; observation of Individualized Instruction in a variety of schools ranging from inner city to suburbia, New York City; observation of the EPDA program in Tampa, Florida.

During the past year the system has purchased numerous materials. Teachers were introduced to many of the latest materials for individualized instruction at a publisher's demonstration at the summer workshop.

One of the newest and most exciting teaching techniques introduced to our teachers this year was creative dramatics. With the addition of a creative dramatics specialist to the staff, we were able to instruct teachers in this technique. After a series of six workshops, teachers were able to use a technique which improved student communication and helped motivate them in other school activities. Eighty-two teachers participated in the workshops; others attended classroom demonstrations in their schools. An unexpected outcome of the teacher workshops was that when teachers participated in creative drama related to classroom situations they found they were better able to understand their students. These sessions seemed to have a therapeutic effect on the teachers.

Objective 8--Develop model for change

A model of "planned change" in the Chapel Hill City Schools remains in the development stage. We have found that clearly defined and communicated goals are essential. It is most helpful if the goals are written in behavioral terms which are measurable. This is most helpful when an attempt is made to evaluate and determine if the goals have been reached. However, it is also possible that objectives written in behavioral terms may be too specific and therefore restricting. Care must also be taken to insure that goals are attainable and the behavior is realistic. When objectives are not realistic they must be modified or they will probably be ignored. We have attempted to state our objectives clearly and communicate them often.

The definition of roles has been quite important. The teacher education staff began by writing their own job descriptions for all part-time staff and participants. When change occurs there is great insecurity and confusion. Clear-cut roles and objectives are necessary to overcome this and give confidence to both staff and participants. Clear-cut job descriptions also make the distribution of decision-making responsibilities more clearly defined.

Communication is essential and very time consuming. We found that regular staff meetings were necessary in order to have proper communication and to give the reinforcement that each staff member needed. Communication seemed to be excellent in the workshop, but was quite difficult during the school year when we did not have direct access to the teachers. Supervision and visits to the school helped. Written communications from the staff to teachers was helpful, but often ignored with the abundance of paper and communications which teachers daily receive. We found our most effective and economical way to communicate was to release teachers from the classroom for several hours at a time.

We are experiencing that change occurs slowly and is often painful both for those implementing change and those affected. Our greatest asset has been that the entire system has adopted the philosophy of individualized instruction. Some teachers have felt threatened by the change. Other teachers and administrators emphasize that because of the unrest among students this is the wrong time to institute a change.

The use of certain exemplary teachers as a model for imitation has been quite successful. Teachers like to see a working model before they attempt certain changes in their classrooms.

A dedicated, capable staff who can relate to teachers have a good chance of effecting change. We have also found that the principal is one of the key factors in determining change within an individual school.

F. Evaluation

The EPDA project for 1969-70 in Chapel Hill has consisted of a series of strategies to promote individualized instruction. The strategies consisted of the Individualized Instruction

Workshop; Released Time; the Mid-Year Evaluation Survey for the Secondary Level; the Elementary Reading Workshop Series; Model Programs at the Secondary Level; and Creative Dramatics. Each item will be evaluated as an entity.

1. Individualizing Instruction Workshop (Aug. 11-22, 1969)

The bar graph (figure #1) indicates the divergent responses of the elementary and secondary participants to the multi-topic structure of the workshop. Refer to Appendix C for a description of the various topical activities.

2. Released Time

At the elementary level, teachers were systematically released from classroom duties by M.A.T. candidates for half-days in order to develop materials for individualized instruction. Each teacher was released approximately fourteen times during the year.

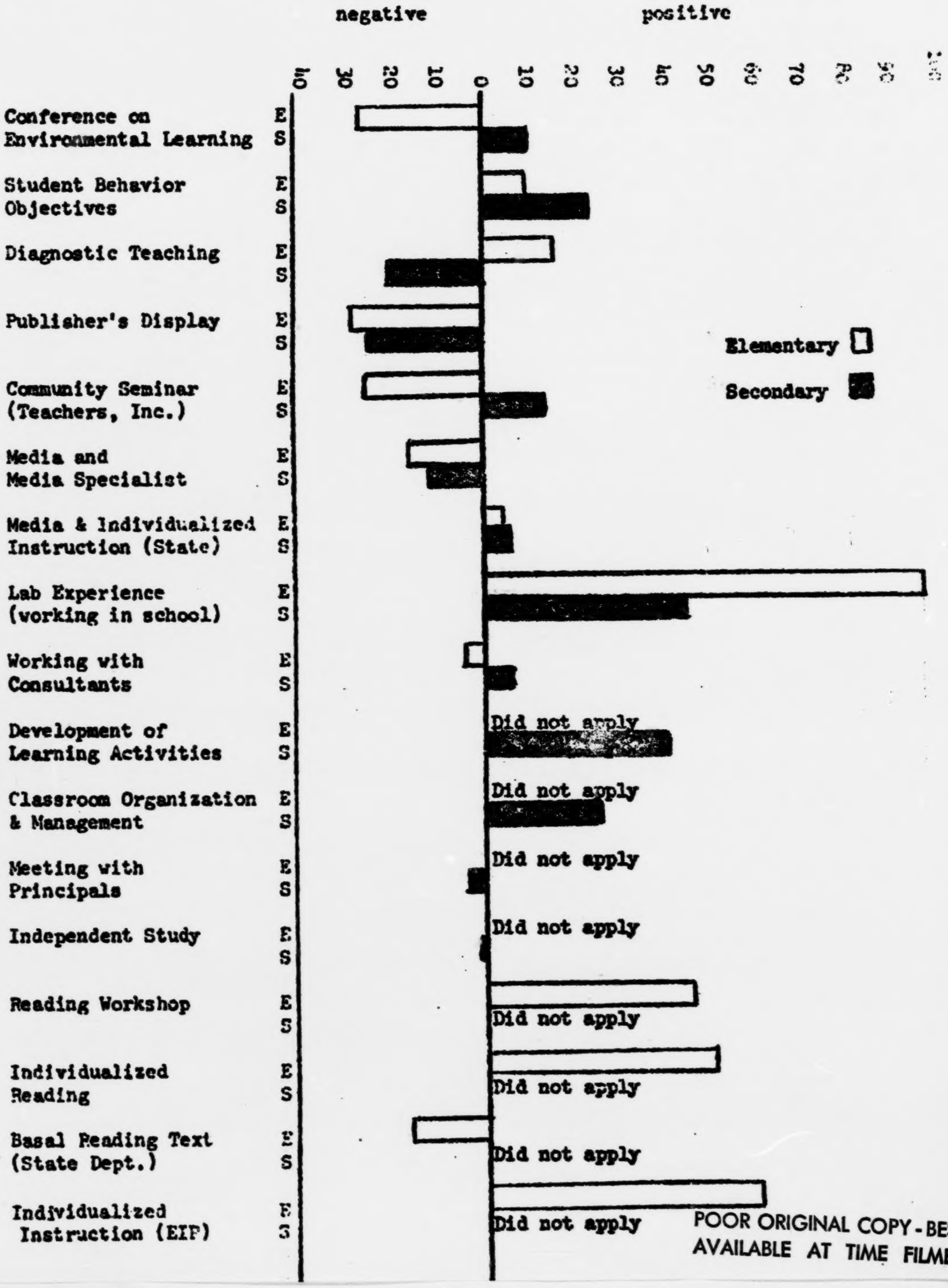
During the first semester, secondary teachers were systematically released from classroom duties for half-days by enrichment teachers. Seventy-three teachers were released for approximately 950 hours for activities oriented toward individualized instruction.

Ordered List of Released Time Activities at Elementary Level (See Appendix D for Released Time Checklist)

1. Plan units and lessons which promote individualized instruction.
2. Review supplementary books, films, filmstrips and records to be used in the classroom.
3. Meet with other teachers for grade level planning.

Figure #1

INDIVIDUALIZING INSTRUCTION WORKSHOP EVALUATION
August 11-22, 1969



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4. Prepare skill files
5. Prepare and evaluate student work folders
6. Share ideas and plans to promote individualized instruction
7. Prepare transparencies, charts, tapes and A-V media
8. Select library books for individualized instruction
9. Read professional books and articles on individualized instruction
10. Prepare interest and learning centers
11. Attend workshops with other teachers

Ordered List of Released Time Activities at Secondary Level

1. Departmental meetings/curriculum development (115)
2. Creative dramatics (89)
3. Parent-teacher conferences (31)
4. Interdisciplinary department meetings (17)
5. Black literature study (16)
6. Pinecrest trip (15)
7. Interdisciplinary planning (14)
8. Independent study (13)
9. Oral language development (12)
10. Learning center planning (9)
11. Social studies evaluation (8)

Table of Involvement of Released Time (Secondary)

Number of Times Released for three-hour period	Number of Teachers
1	9
2	20
3	12
4	5

Number of Times Released for three-hour period	Number of Teachers
5	8
6	2
7	3
8	2
9	7
10	1
11	1
12	1
14	1
16	1

3. Mid-Year Evaluation Survey

Secondary

During the first semester, EPDA scheduling concentrated on the release of department chairmen and the members of their departments for planning, members of interdisciplinary "teams," and teachers with specific needs such as the need to exchange information with colleagues before parent-teacher conferences. As indicated by the survey, many problems have occurred. For example, the release time for some teachers was inconvenient and conflicted with other events; vagueness existed regarding the use and purpose of the release time; some teachers complained about the inconsistency of their work with spasmodic release; and the effectiveness of the enrichment teachers was diminished by the "substitute-characteristics" of their roles. Therefore, it was necessary to change the strategy of the EPDA project for the secondary level. For evaluation summary see Appendix A.

Elementary

At the request of elementary teachers for more assistance in individualizing instruction, specifically in the area of reading, EPDA offered a series of four-day, grade level, system-wide workshops. Materials were developed to individualize the four state-adopted basal reading series. Time was also spent in evaluating the program to this point. For evaluation summary see Appendix B.

Teacher evaluation comments concluded that the workshop was very beneficial because of the discussions and the sharing of ideas. Allotment of time for the development of materials and new ideas on methods for individualizing was profitable. Future workshops of this nature were requested.

Specific comments:

"This workshop has been the most beneficial one I have ever attended. I have not really understood the concept before and have had many different ideas. I will not be able to put as much in practice this year as I would like but will feel much more confident next fall. I like following the basal reading program."

Recommendations for change suggested that more could be gained from planning the workshop earlier in the school year. Ideally, more time should be allotted to thoroughly complete the materials; a full teaching day was preferred to the half day set aside for the workshop.

4. Model Programs at Secondary Level

After an evaluation of the EPDA program at the end of the first semester, the strategy of the program was expanded to meet identified needs in individual schools and to capitalize on individual strengths of persons involved in the program. During the second semester, the enrichment teachers concentrated on the development of projects which functioned as models of diagnostic and prescriptive teaching.

a. Junior High Tutorial Reading Program (see Appendix E)

Number of Students	
Participating in Program	58
Increased Raw Vocabulary Score	30
Decreased Raw Vocabulary Score	15
No Change Raw Vocabulary Score	5
Increased Raw Reading Score	25
Decreased Raw Reading Score	23
No Change Raw Reading Score	2
Information Not Available	4

Gains Noted	Raw Score Points
Mean Increase Vocabulary Score	1.5
Median Increase Vocabulary Score	2.0
Mean Increase Reading Score	1.9
Median Increase Reading Score	0

Subjective evaluations by students, teachers and tutors indicate an overwhelming success in the following areas:

1. The one-to-one tutorial situation is an ideal method for teaching remedial reading when every student brings a different set of problems to the reading situation.
2. The tutorial set up, in many cases, was the first time that the student had received individual attention. We noted many positive changes in the students' self-esteem from having one person express genuine interest in him.
3. Many students, in reading class, participated in a successful academic situation for the first time in many years.
4. The community and the schools were brought closer together by the participation of community volunteers.
5. In many cases, teachers' comments indicated a change in the tutored student's attitudes was evident in the classroom.
6. Secondary level teachers were cognizant of the tutors' selection and use of appropriate materials for reading remediation based on diagnostically attained information.

The short ten-week duration of the program, better post-test conditions and the use of an evaluative tool which stresses comprehension rather than basic reading skills are conditions reflected in the minimal gains in raw score points.

b. Learning Center (See Appendix F)

The rationale and framework for a Learning Center at Grey Culbreth School was developed by an enrichment teacher. However, delays in school construction prevented the realization of a functioning learning center this school year. The enrichment teacher performed in a modified role as an adjunct to the library rather than a supplement to the library and classroom.

c. Independent Study at the High School
(See Appendix G)

d. Small Group Work

An enrichment teacher was assigned to the social studies department at the high school to develop and execute a model of small group work based on skill needs and interests rather than ability grouping. Approximately 150 student and two teachers were involved in the moderately successful model.

5. Creative Dramatics (see Appendix H)

Creative Drama is used to create situations in which students and teachers strip away the layers of defense mechanisms which have been acquired and reveal to themselves and to other people a more complete self.

In workshop situations, teachers are presented with sequential development, a series of techniques (creative drama methodology which translates ideas into the dramatic form) that the teacher can apply in the classroom. This process should lead to greater rapport with students and success in role-playing (or socio-drama) pursuits. A typical workshop series would include techniques in pantomimes of emotions and moods; emphasis upon the hands;

assumption of the role of a member of the family; pantomime for two people; and the addition of dialogue.

Workshop Participants

elementary teachers	- 35	(6 workshops consisting of three 3-hour sessions)
secondary teachers	- 24	(2 workshops consisting of six 3-hour sessions)
enrichment teachers	- 9	(1 workshop consisting of six 3-hour sessions)
M.A.T. candidates	- 14	(1 workshop consisting of three 3-hour sessions)
Total no. of teachers	82	

III. Conclusions

The changing of both the educational philosophy and program for a total school system is an ambitious goal. The implementation of a philosophy for individualized instruction was largely achieved. In general, a different attitude toward instruction was established for teachers began thinking of their classes as individuals, rather than as groups, and began questioning what were the best methods to meet the needs of the individual. A definate increase in the use of media and a demand for avaialable materials was also evident.

One of the major strengths of the program was the development of a functioning teacher education staff. This staff developed and carried on programs of pre-service and in-service education. Through funds from this grant, additional teachers were employed to relieve regular teachers. This gave release time to teachers to study, plan, and produce materials which would better individualize instruction. By the end of the school year the majority of our classroom teachers were more knowledgeable about individualized instruction and had tried many of the techniques in their own classrooms. Through diagnostic techniques, teachers were better able to plan instructional programs which were more appropriate to student needs.

One of the major problems in initiating any new program is the time lag between the planning and the ensuing smooth functioning of the program. Much of the first semester of the school year was spent in trying to establish what materials and techniques were most effective for our individual students. AS M.A.T. interns were used as members of the elementary enrichment teams, a period of time was necessary to properly orient and train them. This resulted in the regular classroom teachers' experiencing feelings of frustration for they could not be released in early fall as they had anticipated. At the secondary level, the enrichment teachers felt more like substitutes, often felt inadequate to deal with discipline problems, and did not feel a part of that school's staff. Regular sessions were held with these enrichment teachers in order to build their own self-concept and their feelings of importance to the project. If the role of the secondary enrichment teachers had not been changed, many of them would have resigned.

One of our greatest problems was the need for additional money to purchase materials for, in order to individualize instruction, a variety of materials at different levels is necessary.

There was a difficulty in communicating to the public our individualized instruction program. Our efforts to involve members of the community in our curriculum planning were too limited. Some parents feared that a less structured program would cause more discipline problems and students would not learn the "basics" they deemed essential. Our publication to inform parents of our program was criticized by some because it appeared to place too much emphasis on students' desires and interests. These parents felt that students were not capable of making decisions concerning their own educational programs.

A well-trained teacher education staff and a willingness of teachers to try new ideas contributed most to the success of this project. Teachers believed in the philosophy of better meeting individual needs and were anxious to adopt techniques which would enable them to reach this goal. Site visits to other schools gave teachers insights into workable systems which could be modified for use in their own classrooms.

It was found that the principal's support was one of the main ingredients for successful implementation within an individual school. When principals believed in the philosophy and were willing to back their teachers, there was assured success. When principals showed apathy or disinterest in the program and the efforts of teachers, little progress resulted.

The probability of a more successful program would possibly have increased if the resources and efforts were concentrated into model school programs rather than encompass an entire system. If the resources and efforts were channeled into fewer schools, teachers and administrators would have received more support, and it is hypothesized that the program would have been more successful.

In the judgment of the participants, the most significant aspects of the project was the opportunity to orient themselves to the different aspects of individualized instruction. Teachers asked for and received release time and workshops to accomplish these objectives. It is expected that teachers will continue to search for better ways of individualizing instruction in the future. They will also be cognizant of better utilization of media. The program was designed to meet needs specified by teachers and requests for assistance were met in most instances.

After one year duration, this project was able to noticeably alter the educational philosophy of the system and to make teachers more aware of meeting individual needs. Teachers are now using more diversified media and techniques to make instruction more appropriate. It is felt that this system has met its major objectives for the first year of the project and remains on its time schedule for developing a functioning individualized program over a three year period.

In the next year's project more emphasis will be placed on evaluation. A strategy for next year's project may be found in Appendix K.

Appendix A

SECONDARY EVALUATION SURVEY, EPDA

1. Have you become familiar with any outstanding books and articles that are concerned with creative teaching during the first semester?

   Yes--13 No--15

2. Have any events of increased individualized instruction occurred in your classroom this semester?

   Yes--22 No--7

3a. Have you used any diagnostic tools (either formal or informal) in your classroom this semester?

   Yes--23 No--4

b. Have you used cumulative folders to get pertinent information regarding any of your students?

   Yes--25 No--5

c. Have you been able to prescribe appropriate instruction based on information arrived at diagnostically?

   Yes--24 No--5

4a. During your release time, have you identified materials which are already available that you could use in your classroom?

   Yes--19 No--9

b. Have you developed or prepared instructional materials during your release time?

   Yes--11 No--18

c. Have you stated your educational goals for the students in behavioral terms?

   Yes--22 No--7

5. During your release time have you visited or observed individualized teaching techniques in other classrooms or schools?

   Yes--18 No--12

6. Have you participated in workshops or conferences with other teachers, parents and students to develop and share ideas or plans which promote individualized instruction?

   Yes--18 No--12

7. During the first semester, have you received recognition from any source in the school system for your efforts toward individualizing instruction?

   Yes--5 No--24

8. Briefly summarize how you have used your EPDA release time during first semester.

   Departmental activities including curriculum development--24
   Creative Drama--7
   Interdisciplinary Teams--7
   School Visits--5
   Individual Work--5

9. Please comment on the effectiveness of the following items and offer your insights into reasons why these items were effective or ineffective:

   a. Enrichment teachers
      Most responses indicated that the use of enrichment teachers was ineffective because of their "substitute-type" role. Many teachers found the individuals involved pleasant and intelligent but grossly hampered in their function.

   b. Scheduling of EPDA Release Time
      Responses ranged from wanting blocks of time (several days) to periodic release. Generally felt that communication system was efficient.

   c. Substitute Teachers for EPDA Projects
      Generally regarded as ineffective, although substitutes were used sparingly and usually qualified in the area in which they substituted.

10. Any judgments or suggestions concerning the EPDA program will be appreciated:

    Positive: Model programs great; EPDA project excellent idea that should be continued.

    Negative: Questioned planning and implementation of program in "hostile" atmosphere. Basic objection to fragmentation effect when teacher leaves classroom.

Appendix B

ELEMENTARY EVALUATION SURVEY, EPDA

1. Have you become familiar with any outstanding books and articles that are concerned with creative teaching during the first semester? Approximate number?

    a. Yes--102 No--3
    b. Minimum of 1 to maximum of 20--average of 7

2. Have any events of increased individualized instruction occurred in your classroom this semester?

    Yes--104 No--1

3a. Have you used any diagnostic tools (either formal or informal) in your classroom this semester?

Yes--105 No--0

b. Have you used cumulative folders to get pertinent information regarding any of your students?

Yes--104 No--1

c. Have you been able to prescribe appropriate instruction based on information arrived at diagnostically?

Yes--105 No--0

4a. During your release time, have you identified materials which are already available that you could use in your classroom?
Yes--103 No--2

b. Have you developed or prepared instructional materials during your release time?

Yes--104 No--1

c. Have you stated your educational goals for the students in behavioral terms?

Yes--99 No--6

5. During your release time have you visited or observed individualized teaching techniques in other classrooms or schools?

Yes--93 No--12

6. Have you participated in workshops or conferences with other teachers, parents and students to develop and share ideas or plans which promote individualized instruction? Creative dramatics workshops?

   a. Yes--105 No--0
   b. Yes--35 No--70

7. During the first semester, have you received recognition from any source in the school system for your efforts toward individualizing instruction? Do you feel that recognition was deserved?

   a. Yes--84 No--21
   b. Yes--90 No--15

8. Briefly summarize how you have used your EPDA release time during first semester.

   Develop and make charts, skills files, games, tapes, transparencies
   Diagnostic testing and remediation
   Sharing ideas with other teachers
   Observations in other classrooms and at reading center
   Organizing centers

9. Please comment on the effectiveness of the following items and offer your insights into reasons why these items were effective or ineffective:

   a. Enrichment teachers
      Mostly very positive--well qualified, new ideas, effective, very enthusiastic, very good, new ideas good, different approach excellent
      Negative--need to stay all day, should plan and develop lessons of own, need follow-up with teachers, and better discipline

   b. Scheduling of EPDA Release Time

      Good, prefer ½, prefer 4 day relief, prefer 1 hr, prefer all day (varied!)
      Effective, very, very good, extremely effective

10. Any judgments or suggestions concerning the EPDA program will be appreciated:

Very helpful--hope continues
Well organized
Would like more relief
Good job

Appendix C

Individualizing Instruction Workshop 1969 Schedule

August 11 and 12. Conference on Environmental Learning

The purpose of this two day presentation is to give teachers a sense of the new ways in which today's environments are imparting information. Multiple images, films, tape recordings, records, videotape and live television will be used throughout the sessions. The idea is to plunge people into multiple, representative environments, and through discussions come to grips with the sensory impact they make, the themes they contain, the techniques they use, and the images that tend to coalesce from them.

This institute will be conducted by William Kuhns from the Institute of Environmental Response, Chicago, Illinois.

Monday, August 11 (Room 210-A)

Morning 9:00 a.m.
- Session #1 - The Lost Tribe of Mu: Educational Survival
- Session #2 - Who Took the Walls Out of the Classroom? Environmental Revolution and a Learning Revolution

Afternoon 1:30 p.m.
- Session #1 - Rowan and Martin as Cultural Heroes: TV Programming -- Vast Untraced Land
- Session #2 - "Ford Has a Better Idea": 30-second courses in everything

Evening 7:30 p.m.
- Optional - A multi-screen program designed to disclose the bombardment effect in today's media, as well as some of the new sensory responses.

Tuesday, August 12 (Room 210-A)

Morning 9:00 a.m.
- Session #1 - A World of Energy: The Other Environments
- Session #2 - Designing a Media Curriculum

Afternoon 1:30 p.m.

Special group sessions on redesigning present curricula to meet the needs raised earlier.

(Lunch will be available both days at the high school. Publications of the Institute of Environmental Response will be available to participants of the Workshop.)

August 13. Student Behavioral Objectives

There is need for teachers to be able to communicate by statement the proposed change which is desired by the learner. In other words we need statements of what the learner is to be like when he has successfully completed a learning experience. It is a description of a pattern of behavior we want the learner to be able to demonstrate.

At this session of the workshop we will help teachers more clearly define goals so that they can better evaluate their instruction or program more efficiently, and provide a sound basis for selecting appropriate materials, content, and instructional activities.

This session will be directed by Dr. Richard Coop of the School of Education, UNC, Chapel Hill and members of our staff will assist.

Elementary Personnel

Morning 9:00 a.m. - 12:00 a.m.
Group A - Introduction to Student Checker System; Skills File for Reading; Classroom Organization, and Summary of Reading Workshop. (Room 221-A)
Group B - Part 1, Reading Workshop (Room 217-A)

Afternoon 1:00 p.m. - 4:00 p.m.
Groups A and B - Behavioral Objectives (Room 210-A)

Secondary Personnel

Morning 9:00 a.m. - 12:00 a.m.
Behavioral Objectives (Room 211-A)

Afternoon 1:00 p.m. - 4:00 p.m.
Learning Activity Packages (Room 211-A)

August 14. Diagnostic Teaching

In order to effectively individualize instruction we must know each individual student's abilities, weaknesses, and interests. Through instruction on the techniques of diagnostic teaching, teachers will learn about commerical diagnostic tools and how best to utilize them. Teachers will also be taught how to construct and utilize teacher-made diagnostic tests. Emphasis will be placed on diagnostic teaching as a continuing process so that programs can be changed, altered, or adapted to meet individual student needs.

Dr. Carl Brown of the School of Education, UNC, Chapel Hill, will conduct this session.

Elementary Personnel
Morning 9:00 a.m. - 12:00 a.m.
Groups A and B - Diagnostic Teaching (Room 210-A)

Afternoon 1:00 p.m. - 4:00 p.m.
Groups A and B - Write diagnostic tests (or demonstration at Brown's Reading Center) (Room 210-A)

Secondary Personnel
Morning 9:00 a.m. - 12:00 a.m. (Room 211-A)
Terminology clarification on Individualizing Instruction, Classroom Organization and Management

Afternoon 1:00 - 4:00 p.m. (Room 211-A)
Diagnostic Teaching

August 15. Individualizing Student Instructional Programs

This portion of the workshop will consist of teaching techniques and the use of materials for individualizing instruction. The in-service program Starting Tomorrow published by Ealing Corporation will be used as a guide for elementary teachers. Teachers will be given practical and proven lesson ideas which they can utilize in their classrooms. These sessions will be conducted by Jessie Gouger, Lillian Cannon, Group B, and Nathalie Harrison, Group A.

Secondary teachers will work on the development of Learning Activities Packages (LAPs).

Elementary Personnel
Morning 9:00 a.m. - 12:00 a.m.
Group A - Part 1, Reading Workshop (Room 221-A)
Group B - Part 2, Reading Workshop (Room 217-A)

Afternoon 1:00 p.m. - 4:00 p.m.
Group A - Part 2, Reading Workshop (Room 217-A)
Group B - Introduction to Student Checker System; Skills File for Reading; Classroom Organization, and Summary of Reading Workshop (Room 221-A)

Secondary Personnel
Morning 9:00 a.m. - 12:00 a.m. (Room 211-A)
Writing specific behavioral objectives (LAP)

Afternoon 1:00 p.m. - 4:00 p.m. (Room 211-A)
Writing diagnostic tests with specific assignments (LAP)

August 18. Publishers' Display (Cafeteria)

8:30 a.m. - 12:00 a.m. - Display of hardware and software used in individualizing instruction

Elementary Personnel

10:00 a.m. - Use of the four Reading Books in the Classroom, Marie Haigwood, Supervisor of Elementary Education, Department of Public Instruction (Room 210-A)

Secondary Personnel

11:00 a.m. - Meet with Principals at Schools

All Personnel

1:00 p.m. - 3:30 p.m. - Community Seminar (Teachers, Inc.) (Room 210-A)

August 19, 20 and 21. Laboratory Experiences

After six days of very structured instruction, teachers will have the opportunity to spend three days working with consultants on individual problems and interests. Consultants will be available from the North Carolina State Department of Public Instruction, UNC, Chapel Hill, and our staff to work with teachers in such areas as the construction of diagnostic tests, the preparation of student behavioral objectives, and the preparation of individualized instructional materials.

All personnel will work in individual schools.
8:30 a.m. - 12:00 a.m. and 1:00 p.m. - 3:30 p.m.

Consultants Available

Mrs. Lillian Cannon
(Available both weeks)
Mrs. Tora T. Ladu - Foreign Language
(Wednesday morning, August 20)
Dr. Mary Turner Lane - Elementary Education
(Tues. and Wed. afternoons, August 19, 20 after 2:00 p.m.)
Mrs. Barbara Lawler
(Available both weeks)
Dr. Thomas Price - Micro-teaching
(Available second week)
Mr. Tom Pritchard - Encyclopaedia Britannica Math Consultant
(Tuesday morning , 10:00-12:00)
Dr. W. C. Schwarzbek
(Tues. afternoon, Aug. 19, and Wed. morning, Aug. 20)
Mr. Johnny Shaver - Audiovisual Instruction
(Tuesday, August 19, all day)
Mr. Paul H. Taylor - Science
(Tues. and Wed afternoons, August 19, 20)

August 22. Use of Media

Morning 9:00 a.m. - 12:00 a.m. (Room 210-A)

All Personnel

9:00 a.m. - The Use of Media and the Media Specialist: Dr. Clinton West, U. S. Office of Education

10:30 a.m. - Facilities Available Through Department of Public Instruction: Mr. Johnny Shaver, Department of AudioVisual Instruction

Afternoon 1:00 p.m. - 4:00 p.m.

Elementary Personnel

1:00 p.m. - Dr. Golden, EIP in Durham (Room 210-A)

2:30 p.m. - Evaluation

Secondary Personnel

1:00 p.m. - 4:00 p.m. - Evaluation (Room 211-A)

Appendix D

RELEASED TIME CHECKLIST

The purpose of the EPDA released time for teachers is to enable them to plan and participate in activities which further individualize learning in the classroom. In order to evaluate this program, it is necessary to find activities that teachers engage in most often. During the first two months of relief time it is requested that teachers check this list. Your cooperation and interest will be greatly appreciated in order to properly evaluate the program.

This list provides you with some of the acceptable activities and the blank space may be used for additional activities.

Place a check before the activity you engage in each day you are released.

___ 1. Review supplementary books, films, filmstrips and records to be used in the classroom.
___ 2. Observe in other classrooms both in and outside of our school.
___ 3. Meet with other teachers for Grade Level planning.
___ 4. Prepare interest and learning centers.
___ 5. Select library books for individualized instruction.
___ 6. Prepare transparencies, charts, tapes and A-V media.
___ 7. Review and record cumulative folders, test results, and other diagnostic information.
___ 8. Read professional books and articles on individualized instruction.
___ 9. Plan units and lessons which promote individualized instruction.
___ 10. Meet with consultants.
___ 11. Prepare skill files.
___ 12. Hold individual conferences.
___ 13. Attend workshops with other teachers.
___ 14. Share ideas and plans to promote individualized instruction.
___ 15. Prepare games and materials.
___ 16. Prepare and evaluate student work folders.
___ 17. Work with small groups.
___ 18. Construct and analyze sociograms.
___ 19. Produce teacher-made diagnostic tests.
___ 20. Evaluate program periodically.
___ 21. Administer diagnostic tests.
___ 22. Observe at Reading Center.

Teacher ______________________
School ____________ Grade ____

Appendix E

Chapel Hill Junior High Tutorial Reading Program

Acting on requests by teachers, the school administration plans to offer tutorial assistance in reading skills to a limited number of junior high students for the Spring semester, 1970. It is hoped that we will have enough volunteer assistance from interested citizens in the community to enroll at least 30 students from each school in an intensive reading program.

Purpose:

To raise reading level of pupils with reading disabilities.

Here is a definition of "reading disability" which should bring the kind of student we are looking for into better focus: a reading disability exists when there is a significant discrepancy between a student's intellectual potential and his actual reading level. In other words, the student who is best able to respond to remedial reading instruction would have at least normal intelligence. He simply, somewhere along the way, (limited home environment, poor teaching, sickness) fell behind normal expectations in reading accomplishments. He might be reading 3-4 grade levels behind in the 7th grade.

Realizing that reading disability does not originate in a vacuum, it is hoped that the special relationship which can exist between student and tutor will also serve to raise the student's self esteem.

Identification of children:

Forms are to be given to each language arts teacher explaining the function of the reading center. The teacher will then select the students from his class that he feels would most benefit from an intensive reading program. Teachers will be asked to comment on the pupils they had initially chosen. This list would be correlated with one drawn up by the school counselors and names would be added or deleted.

Screening procedure:

1) After the initial identification list is compiled, the reading program coordinators will consult the permanent records of the nominated students in order to refine the list to those students who would benefit from the reading program.

2) The following tests will be administered to all students on the refined list.

- a) Keystone Telebinocular
- b) Audiometer
- c) Durrell

Communication with students is of great importance as the success of the program is contingent on pupil enthusiasm. In small groups prior to testing, a staff member will explain to each group the purpose of the program, the fact that it has to be selective, and explain that they will have a battery of tests. Those not wishing to participate in the program may choose to not participate. The guidance personnel has agreed to talk with each student involved in the program.

3) If the battery of tests indicates that a student does not meet the criteria established for the program, the student will be eliminated from the program and possibly referred to a more appropriate agency.

4) At this point it is assumed that all remaining students are eligible to participate in the reading center based on the testing criteria. Approximately one-half of these students will then be randomly selected to form a control group, and one-half of these students will actually participate in the reading program. A maximum of 30 students will be enrolled in the reading program at each junior high school.

The rationale for using a control group is that it is necessary to prove statistically whether or not such a reading program can raise reading levels. Because of limitations in time and personnel, it is impossible to accomodate all students who need reading instruction. This large number allows us to form a control group. All gathering and interpretation of data will be done by Dr. Barbara Wasik of the School of Education of the University of North Carolina and Michael Henneke, Chapel Hill School Psychologist.

Staffing of the Reading Center:

1) Reading Center coordinators are furnished through EPDA. Rosanne Howard, Marjorie Brown and Don Shull will be assigned to Phillips School and Zora Rashkis and Ruthie Aldridge will be assigned to Culbreth School. Their duties include: coordinating and supervising tutorial activities; designing, implementing and maintaining the reading program; serving as liason between students, parents, tutors and school personnel, and developing and selecting materials.

2) Tutors will be recruited through articles which will appear in the Chapel Hill Weekly outlining the program. Spot announcements on WCHL, contacts through the InterChurch Council, Junior Service League, League of Women Voters and the University YM-YWCA will also be used for tutor recruitment. Other sources of tutors to be considered are 9th graders with study halls.

All volunteers will have five training sessions at the University's Reading Clinic under the guidance of Professor Carl Brown. After this period there will be a screening of those deemed unsuitable.

Training sessions will begin on January 29th at 7:00 p.m. and will continue on consecutive Thursday nights.

Communication between teachers and reading center:

An effective program should provide communication to all the student's teachers. This could be done through written forms or personal conferences. Conferences would be feasible if the program is limited to the seventh grade as their programs are set up in blocks. Other means of communication will be a form that can be attached to the permanent record and a written six week report.

A progress sheet will be kept on each student. This is to be filled out by the tutor. Details of this sheet to be decided after course of study outlined. Each student will have a file with his test scores, etc. Other record-keeping devices needed will be a chart with student-tutor assignments and program cards for each student. This will be helpful in conferring with students' teachers. Also, it would be helpful to keep on file a list of people available to substitute.

Communication between parents and reading center:

Once the thirty students are identified, communication between the staff and parents must be undertaken. In order to inform parents about the reading program and to solicit their support, telephone calls and letters will be used to invite the parents in small groups to a meeting at the school.

Structure and function of the reading center:

Students will be assigned a tutor for one period each morning. The tutor has the potential of working out an additional period of independent work for the student in particular skill areas.

Students will be taken from those classes which the teacher and student both agree that the student is experiencing the least success.

According to the guidance counselors and principals, credit is no problem at the seventh and eighth grade level. Therefore, the student will not be penalized for his absence from class.

Equipment and Materials:

The physical setting of the reading center is of great importance. If possible, we need an area to be petitioned off to allow for the use of audio-visual devices by a few students. Several tables and chairs are needed. Other necessary equipment includes file cabinets, one large table to hold SRA, MacMillan boxes, etc., and book cases for paper backs and other leisure reading material. Cushions and rugs could be used to encourage interest reading.

The assistance of the principals is needed for room assignments and the location of appropriate furnishings.

Reading materials already available:

1. General R.F.U. (Reading for Understanding)--no teacher's handbook
2. Reading For Understanding, Junior--no teacher's handbook
   160 copies of placement test for RFU
3. Secondary Edition SRA Reading Lab, same as IIIa
4. SRA Reading Lab IIIa--two sets
   - two hand books for teachers
   - 37 Reading Lab Student Record Books--100 more mimeographed
5. Steps to Better Reading, book I--42 copies
   book II--40 copies
   about 17 test booklets
6. Classroom Reading Program I, grades 1, 2, 3
   Classroom Reading Program IV, grades 4, 5, 6
   - comes with filmstrips
7. Filmstrips--stories to be used in the teaching of reading
8. Special filmstrip machine
9. MacMillan Reading Spectrum--no teacher's handbooks
   - 4 sets
   - 100 MacMillan Placement Tests

     Reading Comprehension 7 purple
     8 orange
     8 yellow
     8 red
     7 green

     Word analysis 4 yellow
     4 green
     5 blue
     6 purple
     5 red

     Vocabulary development 12 orange
     6 green
     8 purple
     8 blue
     8 yellow
     8 red
10. Two tape recorders and 15 headphones

Other materials will be identified as the program develops.

Availability of Funds:

In response to questions regarding funds for materials and equipment for the new junior high reading program, the following is (according to Don Hayes) appropriate:

"1. EPDA will provide $400 to each school for the purchase of reading materials.

2. Title I will provide $200 to each school for the purchase of appropriate reading materials.

3. Title VI will provide $75 for purchase of testing materials.

4. There are many, many materials purchased by Title I and Title III funds which may be used in this program. Mrs. Cannon and Mrs. Rashkis are aware of these materials and have asked to provide such materials for the program. Also, Mrs. Cannon and Mrs. Rashkis are aware that Title I and Title III equipment is available for use in this project. I feel that all of the equipment purchased for the Title III junior high program should go into this project.

5. I suggest that we contact the principals and attempt to solicit a commitment re space, tables, equipment, and materials.

In short, I feel that we will have an abundance of materials for the program."

Evaluation of program:

A control group will be established. This group will be matched with the group involved in the reading program. The group will be matched according to reading scores, IQs, etc. At the end of the year, this group will be given the same battery of reading tests as those involved in the program and correlations will be formed.

Appendix F

The Grey Culbreth Learning Center

I. Function of the Center

The purpose of the learning center at Grey Culbreth School is to provide facilities for individuals or small groups who desire to work independently on a specific project. Ideally, the learning center should supplement the library and the classroom by containing both remedial and enrichment materials. The center will have materials for individual use, facilities for independent study, and areas for group work. The functions of the teachers in the center are as follows: 1) to supervise students 2) to guide students in locating and using materials and 3) to work with groups that need guidance and direction on projects.

II. Procedures for Using the Center

Students who are sent to the learning center should be carefully selected by their teachers. The student and teacher agree upon a specific area of study and a plan of study that the student pursues while he is in the center. A student must sign a contract with the teacher, to be countersigned by the learning center before he begins working there. It might be advisable to have students keep a daily log of progress to be turned in weekly to his teacher; however, this is left to the discretion of the individual teacher. Teachers are solely responsible for grading the students' academic progress; however, if a learning center teacher feels it necessary, she may report the student's progress to his teacher.

III. Policies of the Center

1. Students must be scheduled to the learning center.
2. Students needing remedial help may come to the center provided the materials are available and/or if they have an independent project that is of a remedial nature.
3. Students may work on LAP's in the center.
4. Students may not use the center for purely pleasure reading, unless it pertains to their projects. The library is for pleasure reading.
5. Students cannot take make-up tests in the center.
6. Students must have signed a contract for a specific project or skill that they are working on.
7. Groups sent to the center may have no more than four members.
8. Materials may not be removed from the learning center without permission.
9. Students who abuse the center's rules will be returned to the classroom. They may return to the center, however, provided they comply with the rules.

IV. The Contract

It is recommended that the following areas should be included in the student contract:

1. objectives of the student
2. a general plan of study
3. estimated number of days or weeks to complete project
4. teacher, student, learning center signature.

Appendix G

EVALUATION OF INDEPENDENT STUDY PROGRAM

by
Mary Jane Margeson, Coordinator
Chapel Hill High School

Chapel Hill High School formally organized and institutionalized its Independent Study Program in February 1970 with the hiring of a part-time EPDA coordinator and with a formal statement of its philosophy and procedure. Our philosophy and rationale recognizes the need for individual instruction and learning for the mature student with the hope "that such a program can promote self-responsibility, personal growth and satisfaction, creativity, maturity, and intellectual self-reliance." The program's procedure is organized with the coordinator as the liason between the student and teacher, and a contract emphasizing responsibility and organization.

Prior to February 1970, independent study had existed informally at the high school. However, student pressure for more independent study, and the resulting confusion chiefly in the community and library, necessitated the formalization of this program.

Since February we estimate that we have had 472 students on independent study with the following estimated breakdown:

	Enter	Taken-off/Completed project
Feb.	159	34
Mar.	128	11
Apr.	94	15
May	91	20

In February the program was really too large for a part-time coordinator, and most of the students taken off independent study were taken off independent study by the librarian for discipline reasons. The discipline problems decreased through more careful selection and guidance, and those who left the program in the subsequent months left most often at the completion of their projects. The program decreased in size in April and May due to two factors: the English department kept their students in class for a planned activity and teachers needed time to prepare their students for final exams at the end of the year.

The majority of students on independent study were drawn from the English department on a voluntary basis. The projects for the last six weeks were as follows: Black autobiography, comedy, Charles Dickens and his works, Dostoevsky, ecology-pollution, expansion of consciousness, free reading, Hermann Hesse, Nathaniel Hawthorne, James Joyce (Ulysses), kings and queens of England, the mafia, books made into movies, the outsider, poetry, poverty, population explosion, science fiction, supernatural and horror fiction, social reform, Steinbeck, Tokien stories, Victorian novel, war novels, Zen Buddhism. Included in this list are the projects of history students. In other departments we had students working on Spanish (second year college level), Algebra I, chemistry (photography processes), and the progressive approach to Geometry.

Student reactions to the program were generally favorable and their suggestions of more personnel are financial considerations which we cannot face at this time. Teachers' reactions to the program still remain mixed, chiefly through a lack of communication and orientation, though opposing philosophies of education were a large factor.

The program is now firmly founded based on as much information as we now have available. Whether the program continues will depend on commitment, persistance, understanding and support, and, of course, financial aid. Enlarging the program is not as much a factor as improving the quality of the program, and its value extrinsically is in helping the teacher cope with the extremes in her classroom without tracking.

Appendix H

Report on Creative Drama

September 1969 - January 1970

EPDA has employed for its teacher-training program a part-time creative drama specialist. The objective for this aspect of the program may be stated as follows:

> That interested teachers will gain skills in the use of creative dramatics in order to better motivate student achievement by participating in a series of workshops.

As the semester progressed, contacts with teachers became more meaningful. Two specific goals to strive for in the workshop situation emerged:

1. To break down the reserves and inhibitions of teachers and create an atmosphere where open exchange and exploration of professional feelings and attitudes could be explored and shared via discussion and spontaneous dramatizations. This, in turn, would allow the teacher to become more willing to expand his own concept of his role as a teacher for himself and his students--to effect more meaningful communication in the classroom.

2. To present with sequential development a series of techniques (creative drama methodology which translates ideas into the dramatic form) that the teacher can apply in the classroom. This process should lead to greater rapport with students and success in role-playing (or socio-drama) pursuits.

With a limited number of workshops for any given group and with only one semester of operation of this program, it is too early for definitive evaluation. Progress toward both goals has been made with each workshop group, but there has been a need to concentrate on the first goal at the expense of the second. Because of the very nature of the kinds of persons who become classroom teachers, it has proved best to go slowly and thoroughly in the affective domain--where the goals involve an attempt to change attitudes as well as actions.

On the basis of the progress that has been made, it is safe to assume that this form of experientially-oriented workshop is a valid aspect of the in-service program for teachers and that the second and third years of its operation may be able to offer some very clear-cut positive results for teachers and students alike.

Structure of the Creative Drama Program

1. Secondary Level - Three series of workshops were held, each series consisted of six three-hour workshops, two of which were held on alternating Wednesdays throughout the semester. These two were limited to English and social studies teachers. The other series was held in September for all EPDA enrichment teachers.

   Methods used included lecture-discussion, film,[1] and actual participation by all teachers in all the creative drama activities.

   The material covered in the workshops included exploration into many aspects of the affective domain through:
   a. Pantomime activities of:
      emotions
      use of the hands
      assuming roles of other people
      small group communication
   b. dialogue
      open-ended skits
      story and history dramatization
      role-playing

2. Elementary Level - Six series of workshops were held, each series consisting of three three-hour workshops, five of which were spaced over November, December and January. One workshop series was held in September for the EPDA lead teachers and MAT's. The other five workshops grouped participants according to their grade level (grades two through six).

   (Much of October was devoted to giving classroom demonstrations in the schools, followed by brief workshops with the grade-level teachers who had been released by EPDA personnel to observe the demonstrations.)

   The workshop procedures included lecture-discussion, active participation in all creative drama activities (some on "adult level" but the majority of them on grade level), class demonstrations[2] and film.

   The material covered in the workshops included exploration into aspects of the affective domain via:
   a. Pantomime of:
      emotions
      creative drama games
      drama activities based on concept learning appropriate
         to grade level and small group pantomimes
   b. dialogue
      story dramatizations
      original skits
      role playing

[1] film: Two sections of film, totaling fifty minutes, were shown to each workshop group. Both were filmed in the classroom. The first section deals with an initial session in creative drama with a group of hostile, low-income, underachieving ninth graders. The second section deals with a classroom of seventh graders (also low-income) who had participated in creative drama activities for several months.

[2] class demonstration: A class of fifth graders at Estes Hills served as a demonstration class. Each elementary level workshop group has observed one classroom demonstration in creative drama activities which began with simple dramatic games. The group is now at the stage where they are experimenting with meaningful role-playing situations and spontaneous dramatizations openly and successfully.

Joan L. Tetel

Appendix I

INDIVIDUALIZING INSTRUCTION WORKSHOP EVALUATION
August 11-22, 1969

Grade or Subject Matter ________
School Secondary

Section I

Please indicate how effective each presentation was in helping you to better understand or develop individualization of instruction. Indicate your response by drawing a circle around the appropriate number on the five point rating scale preceding each statement. Use the key below when answering each statement. Please comment briefly about each presentation in the space provided under each item.

Scale: A Of great value
B Of much value
C Of some value
D Of little value
E Of no value

*Items 1-13 were rated using the following scale:
A=+2, B=+1, C=0, D=-1, E=-2
A positive score indicates that more people felt that the item was positive than felt that it was negative.

A B C D E 1. Conference on Environmental Learning (Kuhns)

+9 (6th position)

A B C D E 2. Student Behavioral Objectives (Coop)

+23 (3rd position)

A B C D E 3. Diagnostic Teaching (Brown)

-22 (12th position)

A B C D E 4. Publishers' Display

-26 (13th position)

A B C D E 5. Community Seminar (Teachers, Inc.)

+13 (5th position)

A B C D E 6. Media and the Media Specialist (West)

-13 (11th position)

A B C E E 7. Media and Individualized Instruction (Shaver)

+4 (8th position)

A B C D E 8. Laboratory Experiences (working in your own school)

+44 (1st position)

A B C D E 9. Working with Consultants in Your Teaching Area

+5 (7th position)

A B C D E 10. Development of Learning Activity Packages (LAPs)

+40 (2nd position)

A B C D E 11. Classroom Organization, Management and Project Suggestions (Rashkis)

+23 (4th position)

A B C D E 12. Meeting with Principals

-4 (10th position)

A B C D E 13. Independent Study (Bauman and Schwarzbek)

-1 (9th position)

Section II

1. What part of the workshop was the most helpful to you?

Working on LAPs	(1)
Workdays	(2)
Behavioral Objectives	(3)

2. What part of the workshop was of the least value?

Diagnostic Teaching	(1)
Publishers' Display	(2)
Environmental Learning (Kuhns)	(3)

3. In what area do you feel the need for an additional workshop?

Structured Individualized Instruction
A-V
Diagnostic Teaching

4. For future workshops would you prefer that it be by grade level, subject matter, school or system wide?

subject matter

5. Summarize briefly your activities during the three days allotted for laboratory experiences.

   mostly LAP work

Section III

1. Have you read any of the selections from the suggested bibliography of the workshop booklet or the LAP?

   Yes--26 No--3

2. What diagnostic processes do you plan to employ during the school year for a more appropriate instructional program?

   Indicated plan--11 Vague--9

3. Did the workshop help you identify media and materials which would assist you in moving toward a program of individualized instruction? Please elaborate on your answer.

   LAPs--7 21 additional yes No--1

4. Is the following behavioral objective expressed in desirable educational form?

   "That the student will understand the relationship between science and the use of technology as illustrated by Burdick and Wheeler's book, Fail-Safe."

   No--26
   Quality of Answer: shallow--12 depth--15

5. Please list ways that creative dramatics could be used in your classroom to better motivate student achievement.

   Seemed to understand concept--6
   Limited information--11

6. List "ideas" concerning methods, materials and procedures that you have acquired during this workshop that will assist you in presenting an improved instructional program.

   LAP (9)
   A-V approach (4)
   material utilization (2)
   inquiry (2)
   creative drama
   classroom organization (2)
   personalizing environment (1)
   health
   guidance teams
   choice of activities

Other Comments:
1. How realistic?
2. Writing LAPs--simply academic exercise
3. Boredom of classroom

Appendix J

INDIVIDUALIZING INSTRUCTION WORKSHOP EVALUATION
August 11-22, 1969

Grade or Subject Matter ______
School ____Elementary________

Section I

Please indicate how effective each presentation was in helping you to better understand or develop individualization of instruction. Indicate your response by drawing a circle around the appropriate number on the five point rating sclae preceding each statement. Use the key below when answering each statement. Please comment briefly about each presentation in the space provided under each item.

Scale:	A	Of great value
	B	Of much value
	C	Of some value
	D	Of little value
	E	Of no value

*Items 1-13 were rated using the following scale:
A=+2, B=+1, C=0, D=-1, E=-2
A positive score indicates that more people felt that the item was positive than felt that it was negative.

A B C D E 1. Conference on Environmental Learning (Kuhns)

-29 (11th position)

A B C D E 2. Student Behavioral Objectives (Coop)

+9 (6th position)

A B C D E 3. Diagnostic Teaching (Brown)

+15 (5th position)

A B C D E 4. Publishers' Display

-30 (12th position)

A B C D E 5. Community Seminar (Teachers, Inc.)

-27 (10th position)

A B C D E 6. Media and the Media Specialist (West)

-17 (9th position)

A B C D E 7. Media and Individualized Instruction (Shaver)

+3 (7th position)

A B C D E 8. Laboratory Experiences (working in your own school)

+96 (1st position)

A B C D E 9. Working with Consultants in Your Teaching Area

-6 (8th position)

A B C D E 10. Reading Workshop (Harrison and Cannon)

+45 (4th position)

A B C D E 11. Individualized Reading (Gouger and Teachers)

+50 (3rd position)

A B C D E 12. New Basal Reading Texts and Individualized Reading (Haigwood)

-17 (9th position)

A B C D E 13. Individualized Instruction at EIP in Durham (Golden)

+60 (2nd position)

Section II

1. What part of the workshop was the most helpful to you?

Workdays	(1)
Reading (Gouger & Teachers)	(2)
Golden	(3)

2. What part of the workshop was of the least value?

Community Seminar	(1)
Environmental Learning	(2)
Haigwood	(3)

3. In what area do you feel the need for an additional workshop?

A-V work
math
class control
learning readiness
Golden

4. For future workshops would you prefer that it be by grade level, subject matter, school or system wide?

Grade level

5. Summarize briefly your activities during the three days allotted for laboratory experiences.

Mostly preparation of rooms
Activity centers
Reading aids

Section III

1. Have you read any of the selections from the suggested bibliography of the workshop booklet or the LAP?

Yes--35 No--21

2. What diagnostic processes do you plan to employ during the school year for a more appropriate instructional program?

26 indicated plan 31 vague

3. Did the workshop help you identify media ~~and~~ materials which would assist you in moving toward a program of individualized instruction? Please elaborate on your answer.

37--Yes 14--no; implied previous knowledge
6--no response

4. Is the following behavioral objective expressed in desirable educational form? Why?

"That the student will understand the relationship between science and the use of technology as illustrated by Burdick and Wheeler's book, Fail-Safe."

No--48 Yes--1 No response--8
Shallow reasons--15 Depth--30

5. Please list ways that creative dramatics could be used in your classroom to better motivate student achievement.

seemed to understand concept--18
limited information--30

6. List "ideas" concerning methods, materials and procedures that you have acquired during this workshop that will assist you in presenting an improved instructional program.

Activity centers
Reading aids

Appendix K

Evaluation Strategy for E.P.D.A. Individualized Instruction Program 1970-71

by

Dr. C. F. Paulson

Chapel Hill City Schools
Chapel Hill, North Carolina
1970

Problems

1. A major problem in the actual instructional operation is the extremely broad range, amounting virtually to a bimodal distribution, of the student population with respect to academic ability and achievement.

2. Similarly, there are major differences in the needs and values of major cultural sub-groups, most importantly between those associated with the University and the blacks, but also including the local business and professional community and those with a more rural orientation. These differences are manifested in both the adult and student population, and present problems in both community support and operation of the instructional program.

3. Rapid integration has "overloaded the system," so that instructional and community problems have emerged much faster than they can be met by the normal evolution of coping mechanisms. Thus, there is at present a dearth of available and effective coping strategies.

4. The overbalance of problems over solutions has produced teacher morale problems:
    a. Perceived skepticism and antagonism in the community.
    b. Loss of self-confidence in ability to cope with problems.
    c. Loss of confidence in system leadership.
    d. Increased anxiety.

5. These factors inhibit the ability to generate effective coping strategies, to even the normal extent, to say nothing of the extent presently required:
    a. Increased anxiety produces decreased flexibility. Anxious persons revert to overlearned responses, even when they are aware of better alternatives.
    b. Loss of self-confidence and optimism decreases imagination and creativity.
    c. Loss of confidence in leadership hinders effective diffusion and implementation of new alternatives.

6. A high turnover rate of teachers, probably in part due to the above factors, impairs the effectiveness of staff development efforts.

7. As a consequence of all the above factors, the school system has considerable difficulty in constructing or evolving popular and durable solutions to problems.

Rationale
Assumptions and Propositions

1. Conventional undifferentiated large-group instructional modes cannot satisfy the diversity of needs and values of a virtually polarized population. Any single program directed at all will probably satisfy none.

2. The school system is committed to desegregation, and is opposed to adopting procedures which would likely lead to resegregation.

3. Homogeneous grouping on the basis of academic ability, achievement, or need would tend to result in resegregation.

4. The various elements of the instructional program are not equally impaired by the diversity of ability, achievement, needs, and values of the student population. Indeed, in some areas, diversity would be advantageous.

5. It is feasible to differentiate instructional activities, so that objectives involving or requiring heterogeneity may be pursued with one set of procedures, while a different set of procedures may be employed in pursuit of objectives regarding specific needs or requiring specific abilities and achievements.

6. Individualized instruction is the most promising presently feasible means of pursuing the latter type of objectives while avoiding the undesirable effect of homogeneous grouping and resegregation.

7. The range and extent of professional skills required to implement and operate the proposed program considerably exceeds that available presently in the system.

8. The most feasible means of meeting this deficiency is through in-service staff training.

Recommendations for Consideration in Planning

1. Staff training efforts should be planned with a realistic view to the need priorities, generality, and durability of effects. Products, like curriculum guides and self-instructional learning packages, have general and lasting utility, while the skills and knowledge themselves acquired and internalized by a teacher are uncertain of application, not readily transmitted with high fidelity, and are often lost through forgetting, displacement, or staff turnover.

2. For the above and other reasons, a high priority should be given to training certain staff members to develop individualized self-instructional materials. As soon as possible, this training should result in the actual production of testable and usable instructional materials and should continue until these materials have acceptable, general, and demonstrable learning effects.

3. The content and objectives of self-instructional materials should be determined in response to a valid and broadly based assessment of need. Consideration should be given to the needs of learners, teachers, the system, and the community. With respect to each of these, consideration should be given initially to such questions as:
    - How broadly is the need perceived by each of the above?
    - If the need is real as well as perceived, how broadly does it affect the above, especially students and teachers?
    - What are the consequences if the need remains unmet?

    Some plausible systematic approaches to need assessment are the Delphi technique, the critical incident approach (Flanagan), and one described in a paper by Gerald Gage. (I can supply papers on each of the above.)

    Need priorities should be based on:
    a. The relative cost or consequences of not meeting the need. Where individuals are involved, both the "cost" per individual and the number of individuals so affected should be considered.
    b. The probable cost in time, money, and other factors for the proposed solution.
    c. The probability that the proposed solution will meet the need, or the probable extent to which the need will be reduced by the proposed solution.
    d. The availability and willingness of staff to work on a proposed need and solution.

4. The effort expended in the development of self-instructional materials should be addressed at the high and low extremes of the student population, and balanced evenly between them, for the following reasons:
    a. Individual personal instruction, with a teacher tutoring an individual, is an extravagant and inefficient use of

teacher time, compared to other activities.
b. Instruction of this type is usually the least effectively managed and the most neglected.
c. Overemphasis on either extreme may have both the appearance and the effect of discrimination.

5. Behavioral objectives for self-instructional materials at the low end of the ability spectrum should probably be convergent and specific, and at the high end, divergent and open-ended, for the following reasons:
   a. There are often specific causes for failure or deficient performance, or at least specific remediation treatments.
   b. Teachers seem to be more sensitive to and articulate about reasons for poor performance than they are about the nature and need for excellence.
   c. To the extent that the curriculum involves sequential skill development, remediation reduces logistical problems in instruction, while acceleration at the upper end of the spectrum in the same areas increases such problems.
   d. Fostering special talent and giftedness tends to require divergent or at least flexible objectives. Basic writing skills objectives are concerned with conventions desirable for virtually all common written communication, while the development of writing talent requires uniqueness and originality.

6. In order that they may be used confidently and prescriptively in meeting diagnosed student needs, instructional programs, and particularly those that are remedial, should be so designed, developed, and described that users know the entry requirements regarding skill and achievement and the learning effects that may be expected with high probability.

7. With respect to the development of individualized instruction, and other instructional innovations as well, some "quality control" methods are required. These are required not only to assure predictability and usefulness, but to protect the program. Isolated examples of inferior materials and inept procedures have a way of achieving much more visibility than their mediocre or excellent counterparts.

   Minimal training requirements should be established for all teachers implementing innovative programs with district sponsorship.

   Similar standards should also be obtained for any instructional materials when they are permanently installed.

   Tentative or experimental programs should be distinguised from established programs in communicating to the public, but the distinction should be deemphasized to students.

8. For their role in individualized instruction, teachers should be trained in diagnosis and treatment of learning difficulties. Diagnostic skills should be useful both in the personal exercise of remediation and in designing or selecting appropriate packaged materials.

   For teachers not involved in development, diagnostic training should focus the use of diagnostic instruments, techniques, and observational cues, coupled with prescriptive training regarding the range of treatment alternatives available, their requirements, and their effects.

9. The "vicious circle" represented in problems 3-5 should be coped with aggressively. If that description is appropriate, it is analogous to moribund shock in an injured person. Without intervention the situation could rapidly deteriorate.

10. In view of the varied and often contradictory expectations of the community and even the staff, the potential of responsiveness is drastically reduced. The emphasis should rather be on taking the initiative. Leadership should be equally aggressive in publicizing and defending procedures and products that prove effective, and in rejecting or modifying those that prove ineffective. Either course should have a sound rational and/or empirical basis. This should reduce the amount and impact of public criticism, or at least assist the staff in coping with it rationally, to reduce its harmful effects on morale.

11. Staff training programs should make specific provision for ventilation of teacher anxieties regarding the instructional program. When accompanied by systematic and reasoned discussion, irrational fears can be separated from legitimate concerns. Clarification of the latter should itself contribute to solutions.

12. It is important that teachers see project objectives, activities, and products as consistent with their perceptions of need. This may require some accommodation from both the teachers and the project. The best way to make two boards fit together is to saw a little off of both.

13. When project activities and objectives are seen as relevant, and some effects can be observed, anxiety should be reduced and morale strengthened. Expectant pioneer fathers derived some comfort and reassurance in boiling water at the doctor's request.

14. Maintenance of morale and management of negativism can be facilitated by documenting the successes and the failures of the project. Generalized negativism is destructive, but negativism appropriately directed and focused serves a useful function. This will require evaluation procedures of sufficient vigor to differentiate good from bad, presented in a manner that is meaningful and credible.

15. Broad staff involvement, and in some cases even community involvement, in need assessment activities increases the probability that subsequent responses to those needs will have both the appearance and the substance of relevance, and both are important.

16. Implicit in the above discussion are the following evaluation needs:
    a. Need assessment strategies, as described in Recommendation 3.
    b. Formative evaluation procedures, relevant to Recommendations 2, 4, 6, 7.
    c. Summative evaluation procedures for instructional systems, relevant to Recommendations 2, 6, 7, 10, and 14.

    These needs are predominantly concerned with internal management and improvement functions.

17. The external, accountability evaluation needs would probably best be met by an adaptation of the Stake Countenance model.

    Specific attention should be given to describing the unique characteristics of the instructional content, as explicated by Stufflebeam, as antecedent conditions for project activities.

Impact Evaluation Example
Behavioral Objectives Workshop

Primary Purpose:

General group assessment of post-workshop skills in writing, critiqueing, and modifying behavioral objectives.

Auxiliary Purpose:

Provide timely, informative and corrective feedback to participants regarding the correctness and adequacy of their post-workshop ability.

Procedure:

1. Divide participants into small, odd-number groups, preferably of 5 or 7. (Odd number groups function better in decision making and problem solving. Three may be too small, and 9 too large.) Consideration may be given to homogeneity with respect to subject matter or grade level.

2. Provide each group with two clear transparencies, grease pencils, and working paper for each member.

3. Provide them with work locations where they won't interfere with each other.

4. Assign each group the task of writing at least one objective that manifests all the desirable characteristics they have been taught, and none of the undesirable characteristics.

5. Further instruct them to write each of the objectives they have prepared near the top of the transparency but large enough to project readably.

6. Allow from thirty minutes to one hour for completion. If time is short or completion is unusually difficult, wait until all but one group have finished.

7. Assemble into one large group, with overhead projector and screen available. Collect transparencies.

8. Presenting each objective in turn, allow an arbitrary but fixed amount of time (example: five minutes) for critical comments from any and all members of the large group. Allow one brief rebuttal from members of the authoring group. Then allow time similar to the above for revision suggestions from the large group. Write revised objective on bottom portion of transparency.

   Observing time limits as announced, and allowing less time than participants seem to want, is important. They should feel that the procedure is too brief, not too long, and the sense of time urgency stimulates participation.

9. Appoint an observer to note the number of separate contributions to discussion that are initiated, and the total number of individuals initiating comments. It would also be desirable to tape record the session, but the above should be done "live" regardless, because such data is difficult to get off the tape.

10. After, but only after, the group critique is completed, a knowledgeable instructor, who may also have served as moderator, should give his own critique and comment on the critiques of the group. Feedback to the group should be quite candid, rigorous, and discriminating.

11. For purposes of workshop evaluation, however, much coarser data will suffice. Each comment of criticism or revision may simply be rated dichotomously, plus or minus. The question of concern is quite simple. Would this comment, made in a real task force group with no "expert" present, have contributed to the quality of the objective produced? Neutral comments are rated negative, as they serve as static in the problem solving effort.

12. Ratings may be applied to each comment as it occurs, particularly if the rater is not otherwise occupied as moderator, or they may be made using notes, including those made on the transparencies, or on the basis of a taped record.

13. The initial efforts, before revision, of each group, in the form of the transparency as presented for discussion may be judged by criteria as taught in the workshop.

14. Thus data collected include the judged merit of the initial objectives, the +, - ratings of group comments, and the number and dispersion of those comments.

15. Usually a simple descriptive summary of the data will suffice. Where appropriate, groups can be compared on the +, - data by use of a sign test.

Advantages of the Procedure:

1. It is highly isomorphic with the ultimate training objective.

2. It permits rapid and timely, informative and corrective, feedback to participants, which is usually not possible in a post evaluation.

3. The time and cost demands for data collection, processing, and interpretation are extremely low. Usually the costs are much higher in at least one of the three areas, but the costs are usually hidden.

4. The activity will likely be seen by the participants as of instructional value, and not an imposition on their time, as many evaluation activities are perceived.

Disadvantages:

The procedure provides incomplete and not too useful data on the achievement of individuals. However, for evaluation of the workshop this is not necessary, and there is some question about the desirability of individuals developing real objectives in isolation, except when solely for their own instructional purposes.

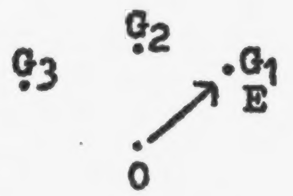
Summative Evaluation of Mediated Instructional Programs

Five major areas of evaluation concern will be discussed in general terms, each followed by a brief discussion with practical examples for implementation.

I. Relevance.

A primary consideration in evaluating an instructional program or component is the relevance it possesses in terms of the relationship between its demonstrable learning effects and the scope and sequence of curricular objectives of the school or district, and/or the specific diagnosed need of an individual learner.

Virtually every instructional system has some behavioral effects, and every user has some kind of goal. Relevance is not an attribute of the system itself, but of the relationship between the system and a given goal or set of goals. For example, let G_1, G_2, and G_3 represent the respective goals of three potential users, a vector (→) represent the change introduced by the system, "O" represent the original condition, and "E" represent the end effect.



The change introduced by the system represents some concurrent change in status with respect to each of the three goals, but the most significant and desirable change with respect to goal 1.

The actual change is also a significant approximation to goal 2, though slightly less relevant. With respect to goal 3, the change introduced may actually have been harmful.

Relevance may be assessed initially by a rational inspection and comparison of the demonstrated effects of instructional program to the desired effects, in terms of local curriculum objectives or diagnosed student needs. Comparing objectives of the program to one's own objectives is more risky, because the objective statement may represent only a wish or intent, and be little related to the actual effect produced.

Another approach, usually illegitimate in summative evaluation, is to apply a test developed from the user's own objectives, which he may have used formerly with his own mode of instruction, to assess the effects of the proposed program. This test may well deviate or be totally unrelated to the developer's objectives, but it is the user, not the developer, whose needs are to be served.

II. Strength.

As mentioned before, virtually every instructional program produces some change. The ability of a program to change students is a separate question from the desirability or "relevance" of that change, and should be treated separately. Strength is more a matter of the psychological impact of the methodologies employed than of the content of the instruction. While a strong program may produce changes other than those desired, it is important to know that the methodologies were effective. It may be possible to modify the content, or imitate the methodologies, and thus produce a program that is both strong and relevant. Similarly, a weak program will always be inefficient unless the methodologies are changed.

It is usually advisable to use the developer's objectives, and even his criterion test, to assess strength. It is assumed that the developer's choice of strategies, methodologies, and media were based on his prudent judgement on the best way to achieve his objective, and that the results are primarily attributable to these choices. Serendipitous effects are often more difficult to interpret. Unless the agent responsible can be identified with some confidence, the findings are usually "chancy" and difficult to duplicate.

Unless a pre-test score of zero can safely be inferred, a pretest will usually be required. (See the discussion on pretests, "Evaluation of Instructional Systems," pp. 28-30.)

One estimate of strength is simply mean gain, with pre-test means establishing the point of origin and post-test means the point achieved.

Another alternative is to determine the relationship between actual gains and the desired criterion. Theoretically, it would be desirable for all students, regardless of where they begin, to achieve the criterion defined by a set of behavioral objectives. The ratio between actual gain and possible gain may be called a "g-ratio," which may be calculated for individuals or groups. The calculation is as follows:

$$g = \frac{\text{post-test score - pretest score}}{\text{perfect score - pretest score}}$$

For example, a student scoring 20 on a pretest and 60 on a posttest, with a total of 100 possible, would have gained 40 of a possible 80 points:

$$g = \frac{60 - 20}{100 - 20} = \frac{40}{80} = .5$$

III. Reliability

Particularly from the point of view of administrators and instructional planners, it is important to know not only the mean or average effects produced by a program, but the real variability of those effects around that mean. Two programs may have the same mean effect, but one may be very consistent, having the same effect on nearly everyone, while the other may work miracles for some and be useless for others.

Reliability should be assessed in a controlled situation, where the program is used with the type of people it was specifically designed for, and in the intended manner.

Two different approaches may be used to assess this kind of "reliability," depending largely on the use and decisions for which the data is collected. The first, which may be called point-achievement reliability, is most useful when mastery is important, as in some aspects of first-aid training, and when the desired criterion level is readily definable. In this case, reliability is simply defined as the probability that a given student from a defined population will achieve the criterion level; or the proportion of students from that population that may be expected to reach criterion.

A second approach may be called increment-achievement reliability. In cases where a single instructional program is directed at a heterogeneous population of students, it is hardly reasonable to expect that all or a major proportion will reach a given criterion level. Such grouping may be justified, however, if one can assume that the program will have some beneficial effect for all students, that regardless of the various entry and exit points most students will experience some gain in the dimension or parameter set by the objectives.

An estimate of the consistency of gains may be achieved by using each student's gain score (the difference between his pretest and post-test score) as his raw score, and calculating the standard deviation, variance, or other estimate of dispersion of raw gain scores around the mean.

A more graphic picture may be obtained by dividing gain scores into quartiles and determining the mean for each quartile.

IV. Robustness

One of the facts of life in education is that few developed instructional programs are consistently implemented as they were intended to be and with the initially intended population. It is important to know the extent to which these deviations may have harmful effects upon mean achievement, or upon the reliability of that achievement.

Assessing robustness requires a deliberate un-control of the treatment. The normal guidelines and suggestions may be supplied, but there should be no more supervision and control than would be present in the normal instructional situation.

Since robustness is an indicator of possible differences in mean effects or variability when a program is used in the field as opposed to the controlled situation, the analytic procedure of choice is a t-test or analysis of variance for significance of difference of the means, between controlled and uncontrolled groups, and/or a test for the significance of difference of variance between those groups.

V. Cost-Benefits

This information usually costs more to obtain than it saves in practice. I would suggest that you deal only with increments of cost and increments of gain.

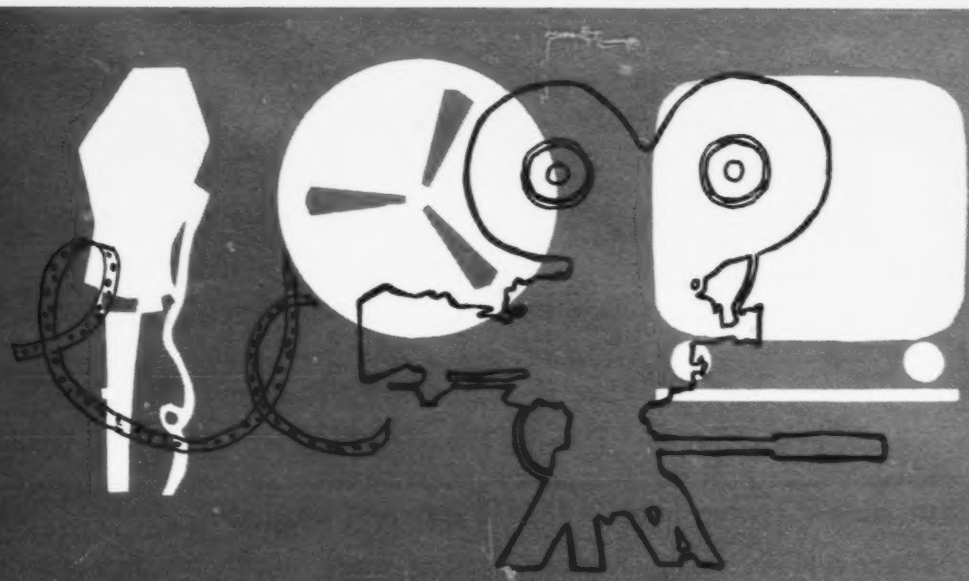
Cost figures would thus be only those unique and added costs for the innovation's use.

Gains figures would only be represented as a proportion of the gains achieved by a prior method, or some alternative.

Gains may also be expressed as a proportion of the amount a discrepancy between previous achievements and a desired criterion has been reduced by the program.

Developmental costs should be amortized over the expected life of the program and not treated as operational costs in a given year.

media manpower
no. 9
june 1970



A Look At Media Functions: logistics

By Dale G. Hamreus and Loring Carl
Teaching Research–Monmouth, Oregon

In the May, 1970 issue of *media manpower* a series of articles was initiated for the purpose of examining the various functions of the media field. Functions were identified in that lead article as one of the major dimensions of the Domain of Media (the other dimensions being institutional settings and responsibility groupings). Nine functions were identified and included developmental research, evaluation, design, production, logistics, utilization, organizational management, information management and personnel management. The design function was the first of the nine to be discussed. This article emphasizes the logistics function.

Before discussing the logistics function, however, brief attention will be given to the concept of function. As used in this series of articles, function refers to a broad yet somewhat specialized area of emphasis that cuts across an organized occupational area, i.e., the Media Domain. Function is not intended to refer to a specific job that a person performs but rather to a broad process that collects around it many different but related activities all contributing toward a particular goal. For example, the goal of the design function is to translate theory and empirical evidence about learners, subject matter content, mediating forms, settings and techniques into instructional systems specifications. Many different activities must be accomplished to achieve such a goal and usually involve several individuals. It is quite common in the typical "media shop" to find that an incumbent's job cuts across more than one functional area, i.e., he might be responsible for performing certain design tasks as well as certain production tasks; at the same time it is rather common to find that several individuals combine parts of their job responsibilities to accomplish a particular functional goal, i.e., cooperate as a team in production.

In general, the notion of function is simply one rather clean way to organize the activities that must be accomplished in a media center thus permitting better planning and management to occur. At the same time a functional organization of the media domain permits a powerful basis to systematically decide upon media training program foci and contents.

The function featured in this article is logistics. The term logistics was selected as perhaps most representative of the many things that are generally that are generally considered as supportive services in a media center. The definition given to logistics is to provide acquisition, storage, supply, and maintenance support to the appropriate operations and management of media in instruction. Those who perform activities within the logistics function can be regarded as providers of media resources by carrying out such tasks as selecting, ordering, purchasing, classifying, cataloging, record keeping, storing, assembling, scheduling, distributing, maintaining, demonstrating, operating, repairing, and managing.

The outputs that result from the logistics function can be identified simply as products or conditions of procurement, maintenance and move-

continued on page 8

Cartoons from Educational Technology Magazine

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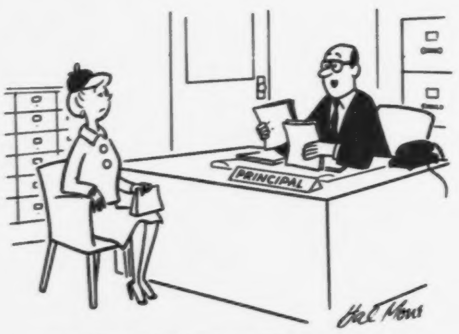
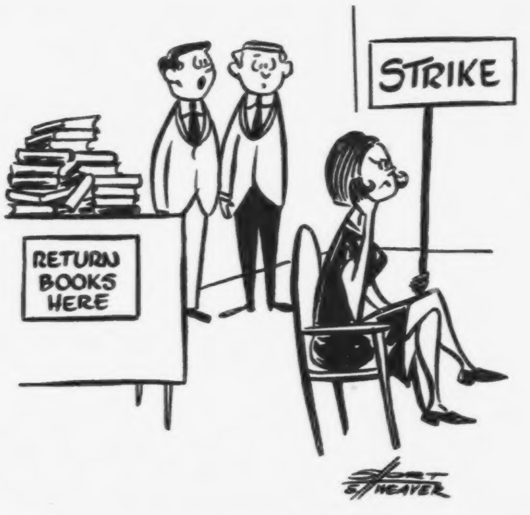
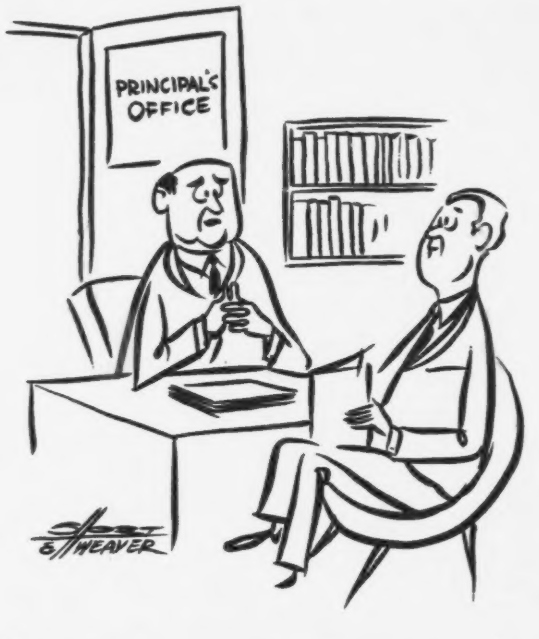


"YOUR TEACHING CREDENTIALS ARE EXCELLENT BUT WE'RE SEEKING A MORE EXPERIENCED PROJECTIONIST!"



"They just changed the library to a RESOURCE CENTER and didn't tell her..."



"AS I SEE IT... IF THE NEW MEDIA DOESN'T SAVE US, TITLES III, IV, OR V WILL ...."

media manpower readers who haven't yet seen the *Educational Technology Cartoon Book* (Educational Technology Publications, Inc., Englewood Cliffs, New Jersey, 1970) will find many chuckles and a few boffos in it. It's a good anthology of cartoons which have appeared in *Educational Technology Magazine.*

Report of the Commission on Instructional Technology – "To Improve Learning"

(In March 1970 the Commission on Instructional Technology released its Final Report to the President and the Congress. It is available from the Government Printing Office–price $0.50. All 124 pages are recommended reading for anyone involved with educational media. Recommendation No. 5 of the report deals with educational personnel and is divided into sections on Administrators, Teachers, and Specialists. The portion dealing with Specialists is reproduced below.)

Throughout American schools the need for talented people who are not specifically trained as teachers is becoming more and more acute. Specialists are needed to develop technology as an integral part of the instructional process. Aides of all kinds are needed to assist teachers in making the best use of technological media and of their own professional capacities. Perhaps most important, scholars in many disciplines and creative people in every area should be contributing their special gifts to the instructional process. "As the field of education assumes new tasks and broader responsibilities," Harold Howe II has written, "there will be a growing need for people with competencies in many areas, from poetry to biochemistry, from plumbing to philosophy, people who might be persuaded to offer their expertise on a full- or part-time basis to the purposes of education."

Technology can achieve its fullest potential in schools and colleges only with technical and paraprofessional support–"media coordinators" serving as advisors on the use of instructional technology, experts on the production and procurement of instructional materials, plus specialists in many different disciplines working with teachers in research and development.

The lack of specialists to facilitate its use in the schools and colleges could well be the Achilles' heel of instructional technology. The urgency for designing machines for easy use in instruction is equaled only by the urgency of having someone available to repair them if they break down. A language laboratory is of little use if it is out of operation for several weeks because chewing gum and bobby pins clog its vital parts. An investment in proper operation and maintenance of equipment is good economy.

Nonprofessional assistants are also needed, especially in the elementary schools. Such tasks as running simple machines, playground duty, and routine clerical duties can be carried out by teacher aides (who may be housewives willing to work part time), thus releasing regular teachers to more adequately employ their professional talents in advancing the quality of instruction.

Planning for the development of instructional technology should include the recruitment of such nonprofessionals. As Professor Robert H. Anderson of the Harvard Graduate School of Education told the Commission:

> The emerging concept of auxiliary personnel in education has already created an impressive literature, which has recently begun to focus on the important topic of *training* auxiliary personnel. Not only can technology play an important role in the training of such workers, but it seems increasingly necessary for these people to be familiar with technology as an aspect of their work.

Whether a staff advisor in instructional technology is necessary might be disputed by those who have been discouraged by experiences with the typical audiovisual department of a school or college. It is the exceptional audiovisual department that is integrated into the fabric of the institution–with qualified audiovisual consultants sitting in on courses, sharing in the teaching methods and environment, and then contributing to improvements through technology and otherwise.

Qualified specialists in the production of instructional materials are scarce. Producers, graphic artists, audio technicians, and programmers are but a few of the professionals needed to develop maximum effectiveness in instruction. Lack of expert advice in the production of instructional television programs, for instance, has often produced mediocre results. All too little is known about how to present instructional material over television effectively. Creative use of the medium has been barely attempted. There is no doubt that the "talking face" has been overdone in instructional television. But even this technique has its usefulness and could be made more effective. Outstanding lecturers who fail to come across over television could improve their performance on the screen with help from skilled professionals.

The scarcity of good programmers for the teaching machine undoubtedly tempered the initial enthusiasm for this device, and may be seriously handicapping current efforts in the various modes of programed instruction. Training and financial support for production and programing specialists should have top priority.

Facilities Planning and Media Institutes—The Beverly Hills Experience

The establishment of educational media facilities in any school system is usually accompanied by a host of training or re-training problems. The Beverly Hills, California School District realized this situation was likely to arise as they planned for new developments. The summer institute conducted in the District in 1969 was one response to this problem.

Several years ago the Beverly Hills School District made provisions for new developments in instructional technology and information systems through major construction projects at the high school and four elementary (K-8) schools. A district-wide information retrieval system was built into the new facilities at these five schools with a central facility located in the high school. Because of the business density and building heights in the Beverly Hills-Los Angeles area, it was decided to connect the high school and each of the four elementary schools by leased lines of the local telephone company. Library and audiovisual services were combined in instructional materials centers at each school. Each of the centers and most classrooms were designed to have direct dial-access by closed-circuit TV monitors and there would be individual monitors in library study carrels.

With these facilities came the need for training teachers, librarians and other educational personnel to be media specialists in their classrooms, schools and districts. Commercial multi-media packages, video tape programs, and the accumulation of off-the-air programs by the district made apparent the need to provide special training in the evaluation, selection, and production of instructional materials that could be utilized over a closed-circuit television and dial-access information retrieval system.

A six week media institute was planned for the summer of 1969 to prepare participants in systems analysis and in the planning/design techniques that lead to the selection of media most appropriate to the achievement of defined learning outcomes. Thirty teachers, librarians and other school personnel were selected from all parts of the United States, including ten from Beverly Hills, ten from other districts in California, and ten from other states. All participants were educational personnel directly involved with classroom teaching and with some leadership responsibilities for audiovisual development and coordination. But already, highly qualified audiovisual directors, administrators and supervisors were not included.

Dr. Don Davies of USOE is flanked by Supt. K.L. Peters (left) and Dean Turner (right), Institute Director for the Beverly Hills Unified School District as he inspects facilities of the District's Information Retrieval System.

The institute schedule included seminars, presentations and discussions. The presentations included such topics as: The Technological Revolution; The Process of Programming; the History of ETV; Introduction to Studio Procedures; Multi-image Projection and 35mm Camera Operation. Opportunity was provided for sharing skills and experiences among participants. Since the group represented a variety of public and private schools throughout the United States, this aspect of the program proved to be even more productive and satisfying than expected.

One of the outstanding needs during the institute was for more time to work on planning and preparing individual and group media projects. As one participant put it: [I need] "time to mull over my project and get started on it. Then assistance available to keep me from hanging myself."

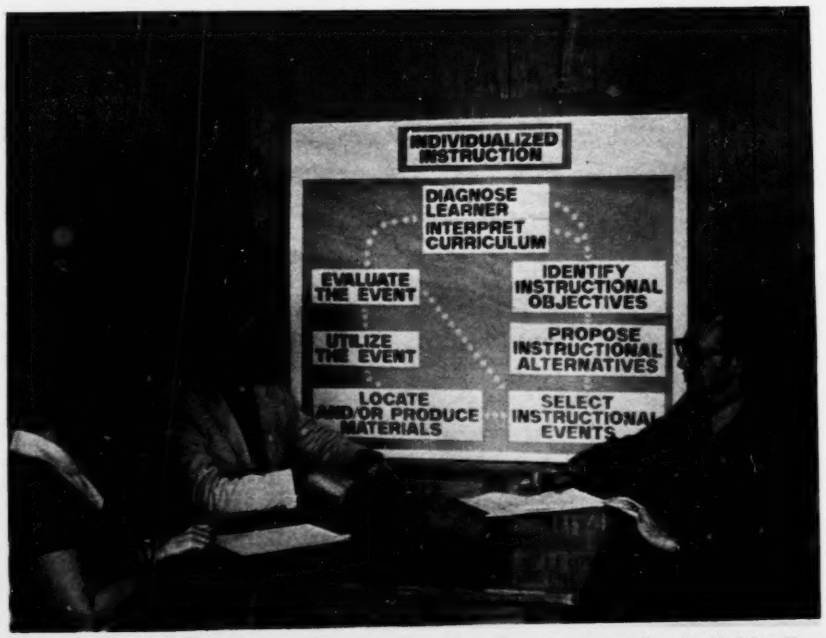
Flexibility within an institute program is improtant. For example, responses from the participants during the institute made it clear that the carefully structured presentations and the content concerning specific behavioral objectives were not achieving positive results. When this became apparent revisions in the time structure and total program were incorporated. The final evaluations indicated that those participants who completed the training in system analysis and planning/design techniques for defined learning outcomes were able to demonstrate significant positive gains compared to initial testing.

Through their institute the Beverly Hills School District provided an all important experience for school personnel in designing and developing instructional materials for the student in a modern school facility.

A Summer Institute and Year-Round In-Servic

Chapel Hill City Schools have a student population from widely divergent backgrounds. Recently, an evaluation of the learning experience of students in desegregated classrooms showed that many traditional methods and materials aimed at the average middle-class white student were no longer appropriate. To solve this problem the program of instruction of Chapel Hill City Schools was revised to include the concepts and principles of individualized and personalized learning as a basic theme. In order to put this theme into practice Chapel Hill developed a three year plan to train all of its teachers to prepare educational materials that utilize media. This Institute For Training Educational Personnel For Creative Teaching was held during the first year of the new plan.

This institute was planned by a teacher-education staff employed specifically to carry out a comprehensive pre-service and in-service teacher education program. The institute was divided into two phases. The first phase was a two-week summer workshop held in the summer of 1969. All teachers in the Chapel Hill City Schools were invited to participate in this August 1969 workshop. The second phase of the institute was an in-service program held during the 1969-70 academic year which involved all academic teachers. Teacher participation in the in-service program was made possible by providing released time from regular classroom duties. At the secondary level, released time was made possible by employing enrichment teachers on a part-time basis.


INDIVIDUALIZED INSTRUCTION
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IDENTIFY INSTRUCTIONAL OBJECTIVES
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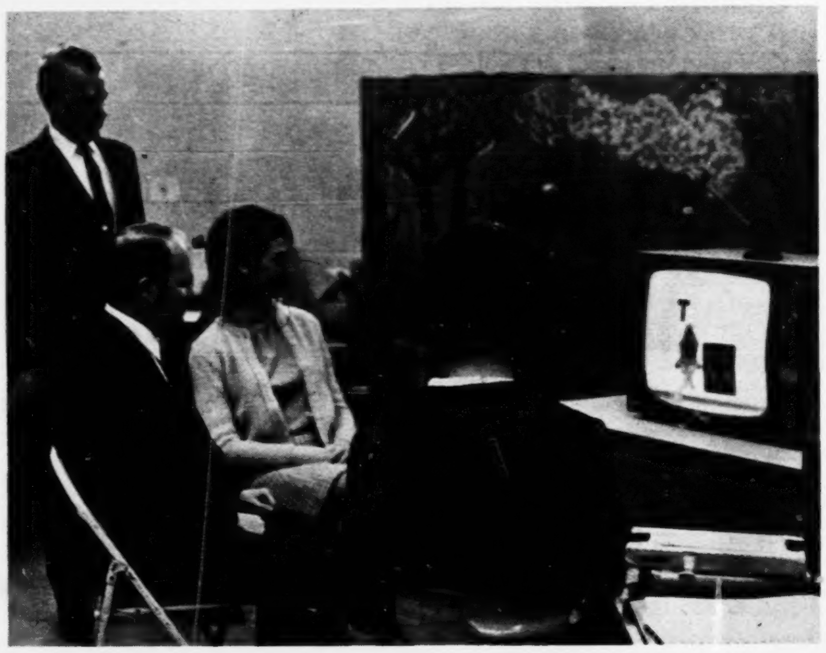
LOCATE AND/OR PRODUCE MATERIALS
SELECT INSTRUCTIONAL EVENTS

Paul Prichard, Director, discusses the diagramatic chart for individualized instruction with Herb Allred and Nathalie Harrison, curriculum specialists.



Mr. William George, Principal of Carrboro School works with Teaching Interns who served during periods of released time for regular teachers.

Approximately 160 Chapel Hill teachers participated in the two week workshop. Teachers were introduced to multiple media environments during a two day "Conference on Environmental Learning." In subsequent sessions, teachers were presented with behavioral objectives and the importance of selecting appropriate instructional events in developing individualized instruction. The diagnostic approach was stressed, and participants were shown both commercial and teacher-made diagnostic tools. Secondary teachers actually prepared Learning Activity Packages (LAPs) and agreed that the LAP materials could be effective in allowing a student to move at his own learning rate and on his own ability level. The importance of not only choosing instructional tools, but of using the information presented in the workshop to prescribe appropriate instruction was apparent from responses such as the following:

> The summer workshop on Individualized Instruction was most valuable. I had read some about it before, but I found my background was too limited. I liked the working part of the workshop best when I was given the opportunity to develop materials for my own classroom.

Training for Creative Teaching in Chapel Hill

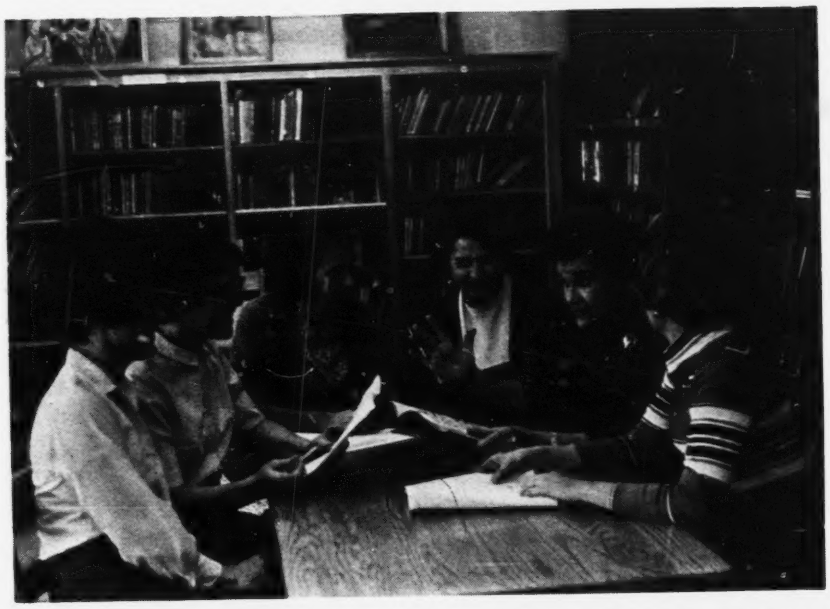
Mrs. Geraldine Francis, teacher at Glenwood School, working with her students at a listening center.

During the spring semester, 1970, thirty-three teachers participated in an audiovisual education course designed especially for Chapel Hill teachers. The participating teachers made audio tapes which were tested and proved quite successful in application of individualized instruction. The in-service program continued through the school year. With released time from the classroom, teachers participated in such activities as media production, curriculum development, school visits, and workshops. School personnel served as instructional staff.

Creative dramatics provided a new and exciting form of media. The creative drama specialist gave a series of workshops for both elementary and secondary language arts teachers. Creative dramatics was presented as an effective vehicle for dealing not only with communication skills, but also with the affective domain.

One of the results of the in-service phase has been the greatly increased use of media in most classrooms. Released time for teachers to develop the materials needed to carry out the concepts presented in the institute was, and is, considered essential to the success of the institute. As one participant remarked:

> The institute has offered teachers that planning and preparation time during the school day that we have so much wanted and needed. The development of materials for individualized instruction take so much time and the release time has certainly helped.



Mrs. West, principal of Glenwood School, discusses diagnostic procedures with fourth grade teachers.

In planning for the second year of their teacher training program the Chapel Hill City Schools plan to put more emphasis on independent study at the secondary level. The staff of the learning resources center will be increased in order to manage additional students on independent study. At the elementary level, more media production capability will be added to expand libraries into learning resource centers. The success of the institute's first year workshop and in-service program to prepare Chapel Hill City School teachers for creative use of media has produced a marked increase in the demand for additional media for the classroom.

The Creative Drama Specialist, Mrs. Joan Tetel, uses pantomime while working with a group of fifth grade students.

EDUCATIONAL MEDIA TECHNOLOGY AT THORNTON COMMUNITY COLLEGE

Thornton Community College has been serving the educational community of Harvey, Illinois near Chicago for over 40 years. In the fall of 1969 the college launched a new program leading to either a certificate or an associate degree in Educational Technology. Blake L. Read, Educational Media Specialist, is the coordinator of this new program. Mr. Read describes the program as one which trains the student for a career as an educational media technician assisting professionals in the design, production, scheduling, operation and utilization of instructional media and equipment.

The technicians program is open to anyone with a high school diploma or the equivalent. Students who are interested in pursuing the program may take general courses during the day, however, the media courses are offered only at night. As enrollment increases the college plans to offer these courses in both the day and evening schools.

The program is planned to provide three types of experiences for the student, (1) formal class work, (2) laboratory practice, (3) on-the-job experience. Since the primary intent of the program is the training of production technicians, there is heavy emphasis on practical experiences which will help the student become competent in media production techniques. The specialized studies in media include: training in still and motion photography; the production of slides, transparencies, charts, posters, television visuals and displays; operation and maintenance of audio-visual equipment; offset lithography; television production; and utilization of other media systems. Each student is required to undertake appropriate projects in all media courses. These projects involve skills ranging from mounting and laminating techniques to the more involved aspects of television production. Media course requirements attempt to simulate on-the-job requirements that the student can expect to find upon graduation.

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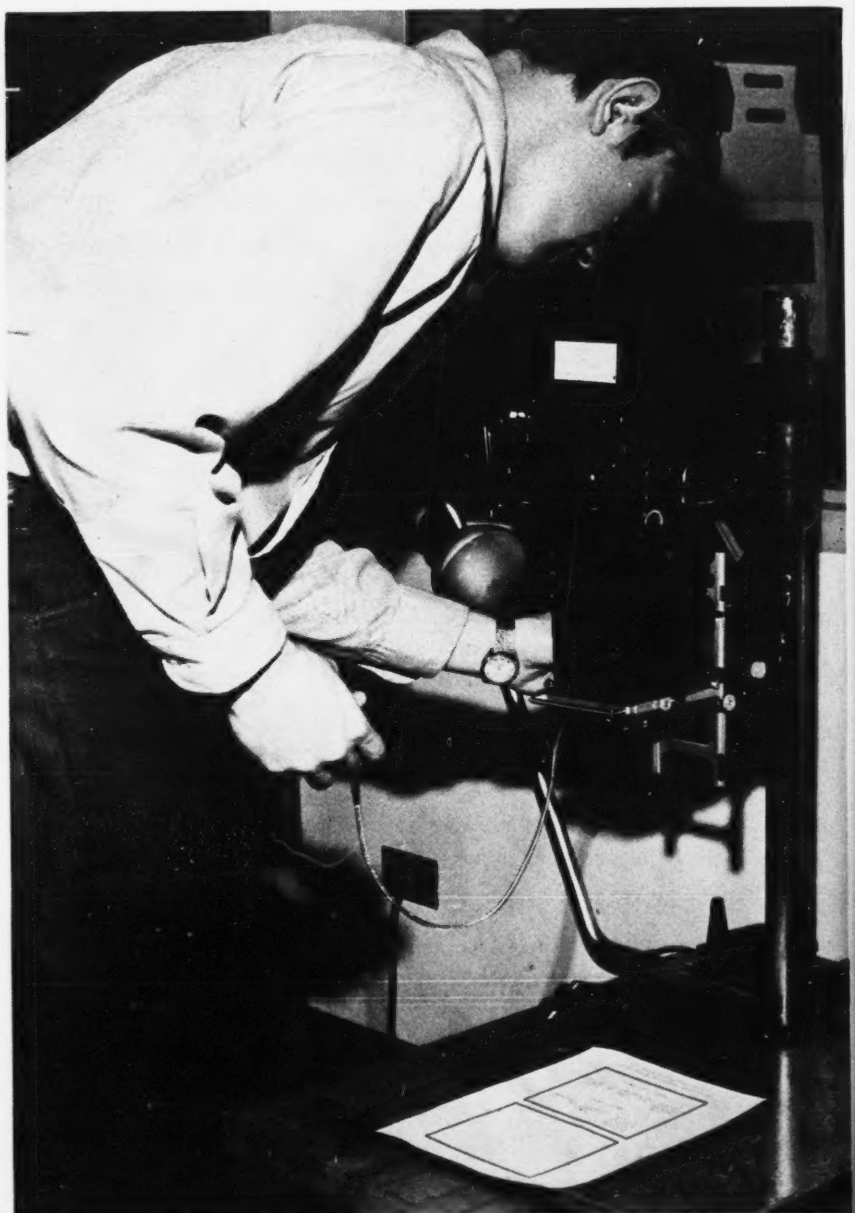

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The students in the certificate program take one practicum and those in the associate degree program take two practicums prior to graduation. Each practicum consists of supervised, on-the-job work experience in which the student spends six hours weekly for 16 weeks in an area business, industry, governmental agency, or educational institution. Emphasis is placed on assigning each student to the practicum situation approximating his job goal. For example, if the student indicates a definite preference for post-graduate employment in industry, effort is made to arrange the practicum in a local industry. A periodic assessment of student progress in practicums by visitations from Mr. Read in collaboration with the student's job supervisor.

Presently there are 11 men and one woman enrolled in the program. One of these students expects to finish the curriculum in one year since he attended the college previously and completed the non-media requirements This particular student has already been interviewed for a job, and, according to Mr. Read, his chances of being hired are very good. Mr. Read adds that he has had several inquiries from schools, junior colleges and universities about potential jobs for Thornton Community College graduates.

Directory of Summer Session Courses In Educational Media Available from EMC

This summer educators will have a choice of nearly 1700 college and university course offerings in new educational media, as listed in the 7th annual *EMC Directory of Summer Session Courses on Educational Media*, now available from the Educational Media Council. According to EMC President Robert E. de Kieffer, Director of the Bureau of Audiovisual Instruction at the University of Colorado, this total represents a 15 percent increase over the number of listings in the *1969 Directory*. "Our

The Educational Media Council annually offers the *Directory of Summer Session Courses* for publication, entire or in part, in educational journals and newsletters; and single copies will be provided free of charge to anyone who sends a stamped, self-addressed standard No. 10 business envelope to The Educational Media Council, 1346 Connecticut Ave., N. W., Washington, D.C. 20036.

The Logistics Function

(continued from page 8)

- Records title, subject, identity number, producer, production date, running time, black and white or color, part of series, etc. in cataloging system (may use computer codings).
- Determines and accomplishes appropriate form of storage for each type of materials and equipment.
- Prepares and distributes a catalog of available materials and/or equipment.
- Determines availability of materials for loaning on dates requested.
- Processes requests for loan of materials following prescribed procedure which include booking confirmation, identity tagging, filing and shipping.
- Processes materials and/or equipment for distribution, giving attention to assembling packages, sequencing and handling details.
- Makes delivery and pick-up of materials and/or equimpment in accordance with established schedules.
- Conducts routine equipment and materials inspection and servicing.
- Sorts and properly stores all items received.
- Conducts periodic inventories.
- Determines condition of equipment for insurance claims.
- Determines justification of staff purchase requests in terms of available money, need, acceptability and quality of item.

D. FILM AND EQUIPMENT INSPECTION AND REPAIR

- Inspects and repairs film.
- Determines and orders replacement footage required.
- Inspects, maintains and repairs all audio visual equipment.
- Inventories and orders equipment replacement parts on a periodic basis.
- Determines on basis of age, relevance, and condition, whether to discard, replace or repair old equipment.

E. EQUIPMENT OPERATION AND DEMONSTRATION

- Determines equipment needs, including time and place, as required by work order.
- Demonstrates proper operating procedures of equipment to all utilizers.
- Sets up and operates equipment components as required.
- Continuously monitors equipment operation and makes adjustments as necessary to gain acceptable operation.

F. COOPERATIVE PURCHASING

- Determines which agencies wish to cooperate in equipment
- Determines basis equipment specifications.
- Puts items out for bids.
- Conducts public bid openings at advertised time.
- Determines if bids meet specifications.
- Identifies low bidders and announces award of contract.
- Prepares composite purchase order based on requests from participant organizations.
- Accounts for the costs of cooperative purchasing.

G. GENERAL

- Maintains files of photographic negatives and proofs.
- Obtains, files, and duplicates Thermofax Masters.
- Maintains duplication services.
- Advises customers in using depository facilities.
- Advises in the use of media and the planning of new facilities.
- Plans, test drives and revises delivery routes.

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* * *

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Publisher

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Communication Service Corporation
1333 Connecticut Ave., N.W. Washington, D.C. 20036
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The Logistics Function

(continued from page 1)

ment necessary to support the operation and management of media in instruction.

The following represent specific classes of activities of that are included in the logistics function. They have been grouped around major headings of management, print materials, non-print materials and equipment, film and equipment inspection and repair, equipment operation and demonstration, cooperative purchasing, and general.

Activities:

A. MANAGEMENT

Defines logistics standards based upon experience, customer requirements, and state and national standards.

Establishes logistics goals.

Communicates logistics goals to staff.

Develops communications network to provide exchange of staff ideas, plans and details of operation.

Instructs new logistics employees in their job role.

Delegates logistics responsibility and authority.

Judges efficiency of logistics personnel.

Judges accomplishment of logistics goals by comparing historical with current data.

Interrogates customers to define and clarify their objectives.

Judges effectiveness of their logistics operations.

Makes decisions regarding purchase of materials and supplies.

Determines and conducts necessary staff training program to assure competent service in all areas of logistics.

Determine logistics operating budget.

Develops and monitors logistics record keeping.

Negotiates contracts for services, given or received.

Designs storage area for efficient work flow.

Analyzes logistics and traffic flow in designing new facilities.

B. PRINT MATERIALS

Compiles and organizes requests for purchase of print materials.

Selects sources and purchases print materials.

Unpacks, inspects and property stamps newly purchased print materials.

Assigns accession numbers to materials.

Compiles listings and annotations to inform users of acquisitions.

Adapts cataloging systems, utilizing Library of Congress or other commercial indexes, to local depository system.

Determines data for cataloging by reviewing title page, table of contents and jacket annotation and/or utilizing commercial cataloging resources.

Supervises or carries out print material processing which includes such things as preparing cataloging cards, labeling and shelving materials, protecting materials by spraying and/or laminating, and packaging for distribution.

Distributes duplicate sets of cataloging materials to affiliated agencies.

Determines by use of cataloging system if material requested is available in depository.

Loans materials to requestors following prescribed procedures.

Places selected materials on reserve.

Microfilms selected periodicals.

Packages and mails references which can be released, or photostated copies of those which cannot.

Maintains files of brochures and publishers lists.

C. NON-PRINT MATERIALS AND EQUIPMENT

Judges merits of commercially available non-print materials considering grade level and subject matter area and selects items appropriate to meet prescribed needs.

Identifies and orders materials for preview.

Determines whether materials received conforms to order.

Identifies type of evaluation required for new materials and/or loan of materials and/or equipment.

Determines booking and cataloging procedures that are workable in local situations.

Determines and marks ownership of new materials by checking against purchase orders.

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FOCUS ON PROGRESS

VOLUME 1 APRIL 1970 NUMBER 1

"LET EVERY CHILD BE THE PLANNER, DIRECTOR, AND ASSESSOR OF HIS OWN EDUCATION." *John Holt*

A student discusses study strategies with Mrs. Peacock, librarian, at the Chapel Hill High School.

WHAT IS INDIVIDUALIZED INSTRUCTION

By individualized instruction we mean that the teacher utilizes various information about individual differences to prescribe appropriate educational experiences to foster maximum development of the individual student. Individualized instruction is not a new idea or fad. Our better teachers have always strived to help each student obtain his maximum development. This emphasis on personalized instruction is now an important part of our educational philosophy for Chapel Hill.

WHY SHOULD INSTRUCTION BE INDIVIDUALIZED?

It is evident that people have different learning styles and learn at different rates. By using appropriate diagnostic procedures teachers are able to gather more information about the student's interests, strengths, weaknesses, and how he best learns. By knowing the "whole child", the teacher may proceed to prescribe the appropriate educational environments and experiences to assist the student in attaining his maximum potential. Success or failure of this developmental process is contingent upon continuous planning and evaluation by both the student and teacher. It is important that the student assumes more responsibility in directing his own learning, because an important purpose of education is to teach students how to make wise decisions and good choices.

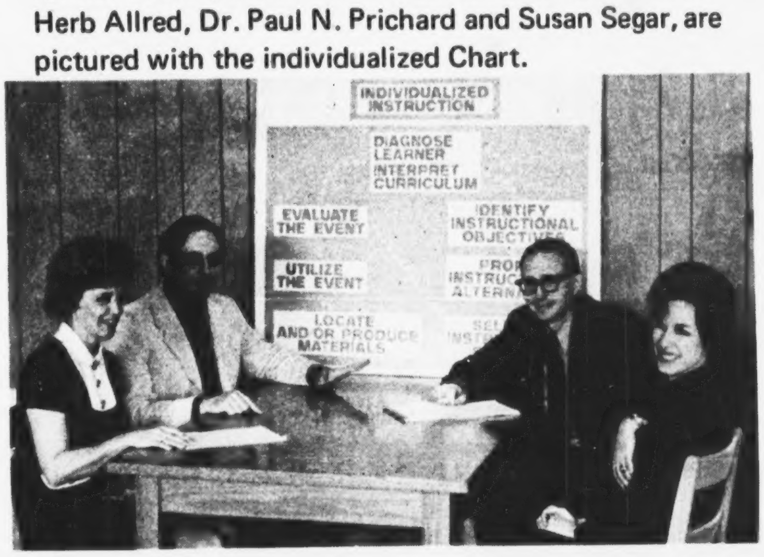
Students may be engaged in a variety of activities under individualized instruction. At various times of the day they may participate in large group lecture, small group discussion, independent study, conferences with the teacher, or a variety of other activities. Students would also have opportunities to work with various media rather than just the traditional textbooks. In other words, through individualized instruction students have opportunities to work with various activities and materials prescribed according to his interests and learning styles.

CHAPEL HILL CITY SCHOOLS GRANT FOR INDIVIDUALIZED INSTRUCTION

Last summer the Chapel Hill City Schools received a grant of $183,000 from the Education Professions Development Act (EPDA) to develop individualized instruction. The purpose of the grant is to organize a program of in-service education to improve the ability of teachers to develop techniques and media for individualized instruction.

The director of the project, Dr. Paul N. Prichard, states, "It is anticipated that over a three year period this school system will develop methods of individualized instruction which better meet student needs." The in-service program began with a two-week workshop for all teachers last August and continues through the school year with release time for teachers to participate in materials production and curriculum development. Mrs. Nathalie Harrison, and Mr. Herb Allred, Curriculum Specialists work with teachers in developing individualized instruction techniques and materials. Mrs. Joan Tetel, Specialist in Creative Dramatics has been conducting workshops for teachers to develop creative drama skills. Stimulated by the resources of this grant the Chapel Hill School System has organized one of the strongest in-service teacher education programs in the state.

Administrators of the E. P. D. A., Educational Personnel Development Act, L. to R. Nathalie Harrison, Herb Allred, Dr. Paul N. Prichard and Susan Segar, are pictured with the individualized Chart.


INDIVIDUALIZED INSTRUCTION
DIAGNOSE LEARNER INTERPRET CURRICULUM
EVALUATE THE EVENT
IDENTIFY INSTRUCTIONAL OBJECTIVES
UTILIZE THE EVENT
LOCATE AND OR PRODUCE MATERIALS

FOCUS ON INDIVIDUALIZED LEARNING

Carrboro - - Sixth grade students tutor second grade students once a week. Rewards are evident for both grade levels.

Frank Porter Graham - - A Second grade teacher allows portion of class to proceed with contract plan after after they have acquired basic skills.

Glenwood - - Fourth grade teachers hard at work preparing materials to individualized the use of the basal reading texts.

Carrboro - - PTA viewed slides of individualized instruction in the classroom.

Chapel Hill Senior High - - Independent study, self-directed learning, affords the student the opportunity to individualized his curriculum in allowing him to meet his own needs and assume the responsibility for his own learning.

Lincoln - - Interested adults are serving in the fifth grade class to have conferences with children in the independent reading program.

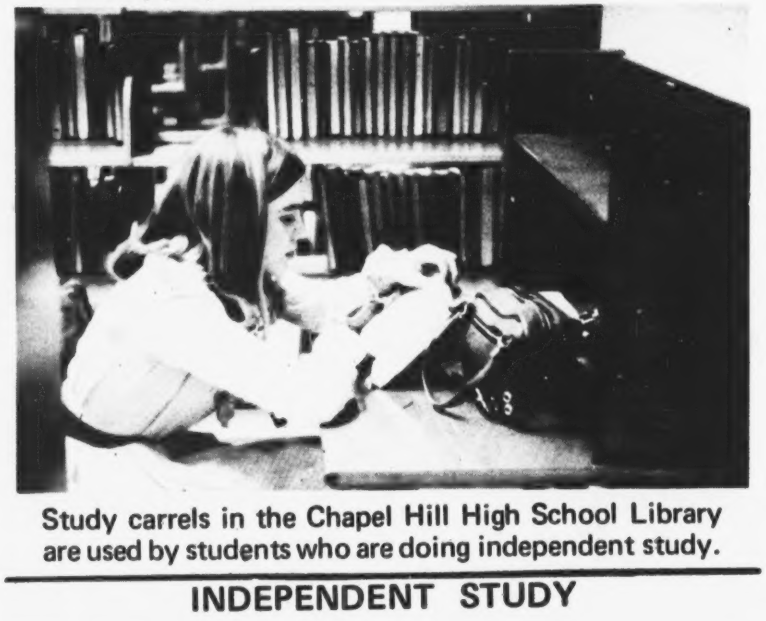
Estes Hills - - First grade teacher received mini-grant to initiate a program of individualized instruction in reading and math.

Guy B. Phillips - - tutorial assistance in reading skills is now offered daily. Tutors work with students on a one-to-one basis to assist the student in raising his reading level.

Estes Hills - - Creative dramatics in a fifth grade class offers meaningful communication through pantomime.

Culbreth - - A new learning resource center is being developed to provide students with motivation, materials, and skills for academic research projects.

Chapel Hill High School - - An English teacher has developed a learning activity package (LAP) which provides a step-by-step guide for students to assist them in deciding on, planning for and carrying out independent study projects.



Study carrels in the Chapel Hill High School Library are used by students who are doing independent study.

INDEPENDENT STUDY

A critical study of supernatural fiction, the writing of a book for young children, and a study focusing on modern philosophical novels--these are independent study activities which are currently being explored by three students at Chapel Hill Senior High School.

Independent study, briefly defined, is self-directed learning. The student in an active educational process does more than simply receive information. He becomes an integral part in the planning, structuring, pursuing and evaluating of his studies. Independent study is one aspect of individualizing the curriculum, in meeting the needs of each of our students, and in involving each student in the responsibility for his own learning.

Bruce Weddle, an English teacher at the high school, has developed a learning package which provides a step-by-step study guide for students that assist the students in deciding on, planning, and carrying out independent study projects. By following the study guide, the student and teacher are working from mutually accepted purposes, goals and objectives, and rules for independent study. In Step One: Thinking about independent study, the student explores his own ideas and the ideas of authors such as John Holt, who wrote *How Children Learn,* an Frank Brown, author of *Education by Appointment.* Each student must write his own definition of independent study.

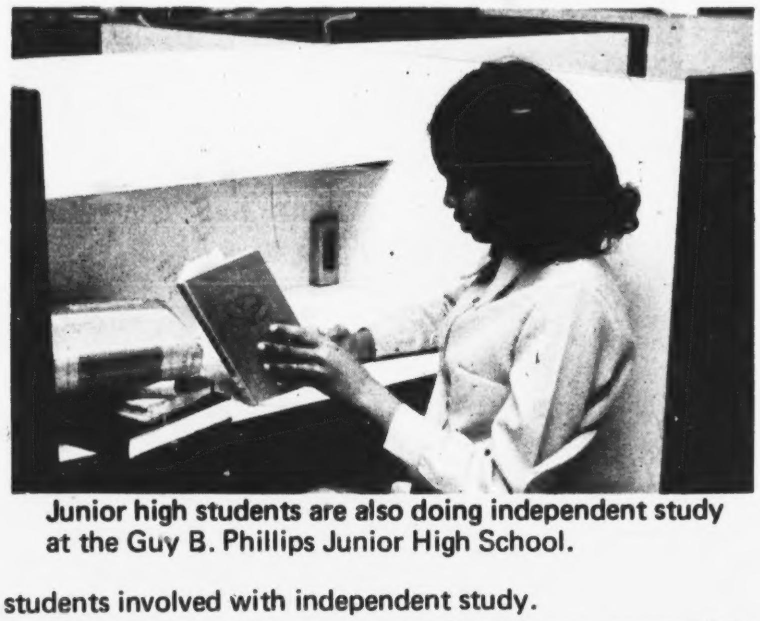
Step Two: Writing a proposal for independent study, the student is required to write a paragraph which explains the student's project. The student deals with these questions: What is it I want to learn? Why is it important to me? How much time is necessary? What materials and activities will facilitate my learning.

Step Three: Planning the project involves a conference with the teacher and final refinement of the project proposal. A tentative reading list, activities, reporting techniques and the evaluation technique are items which merit attention in this step.

Step Four: Carrying out the project includes the establishment of a general minimum standard, discussions with other students, appropriate conferences and appointments as the student carries out his project.

Step Five: Evaluating the project will show the student's ability to judge his own work through the progress reports and a student-teacher conference.

Mary Jane Margeson, an EPDA enrichment teacher, has been assigned to supervise and to provide more assistance to students involved with independent study.



Junior high students are also doing independent study at the Guy B. Phillips Junior High School.

There are two main reasons behind this new approach to learning. First we know that students learn more and in greater depth when they are able to study topics and materials that interest them. Second, a major goal of public school is for young men and women to learn self-reliance and to actively seek knowledge and understanding on their own. The Independent Study program is designed to help students become self-teachers.

ENRICHMENT TEAM AT ELEMENTARY LEVEL

Through the cooperative effort of the Chapel Hill schools and the UNC School of Education, release time during the teaching day is offered to the classroom teacher.

This enrichment team in each elementary school is composed of a lead teacher (who previously taught in the school) and a core of MAT's. Their purpose is primarily to afford release time to the regular classroom teachers in order that they may further individualize their classrooms and develop materials for individualized instruction. A traineeship for the students in the Masters of Arts Program at the University is the secondary objective.

Scheduled release time is given the classroom teachers during the morning. In the afternoon the lead teacher's time is spent in the following ways to aid the teacher to further his involvement in the practice of individualized instruction:

- Preparing skills file boxes
- Making tapes to correlate with lessons
- Making language master cards for children who need specific help
- Gathering materials and preparing media for classroom use
- Individual testing
- Making available professional books relevant to individualized instruction
- Video-taping classrooms
- Preparing games for individualized instruction

Time is also used for scheduling release time and conferring with the teacher regarding lesson plans. The lead teacher also serves as a resource teacher for the teachers in her school.

William George, Principal of Carrboro Elementary school meets with the enrichment team. L. to R., Virginia Kitzmiller, lead teacher, Mr. George, principal and M. A. T.'s Bill Wolf, Charlanne Holbrook, and Heather McKinney.

LEARNING CENTER

Our environment is constantly changing. Teaching is no longer the process of imparting a certain body of knowledge to students. Students need to be taught how to find information for themselves rather than learning a specific set of facts.

Teaching is no longer restricted to one room, chalk and a blackboard, and textbooks. Instead, the student and the teacher have access to a vast realm of visual and nonvisual machinery. Students come into the classroom from an environment which is characterized by media bombardment.

This student is working on a foreign language with help of audio-visual equipment in the Learning Center at Chapel Hill High School.

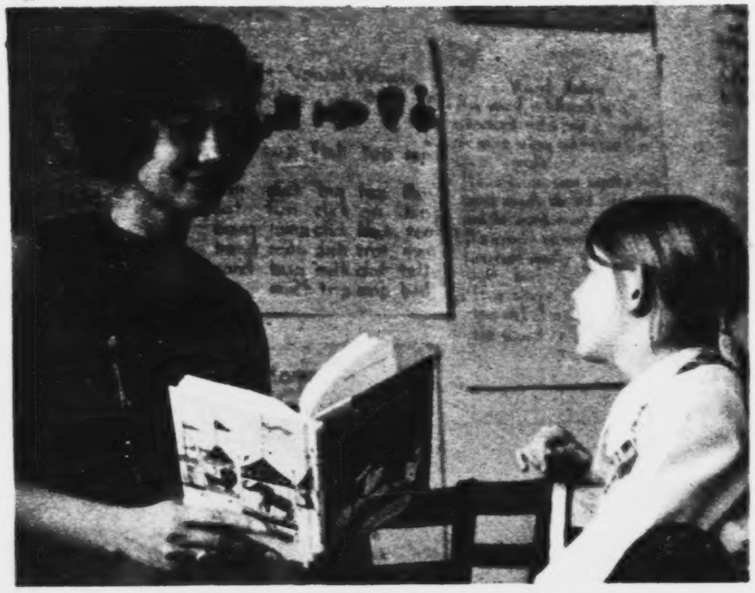
Teaching students to become independent, self-reliant learners who participate in and direct their own learning is the major aim of the Grey Culbreth Learning Center. The Learning Center is an integral part of the school's program and not a substitute for the classroom learning process. Its purpose is to provide an atmosphere in which students of all abilities work on their own levels at their own rates. Each student who works in the Learning Center will find his activities highly supportive of his classroom work. Students working independently may also find their endeavors rewarding in the absence of external peer group pressures.

The Learning Center should serve as a central collection of packaged independent instructional materials either locally produced or professionally published and the resources to produce presentations on a wide range of media forms.

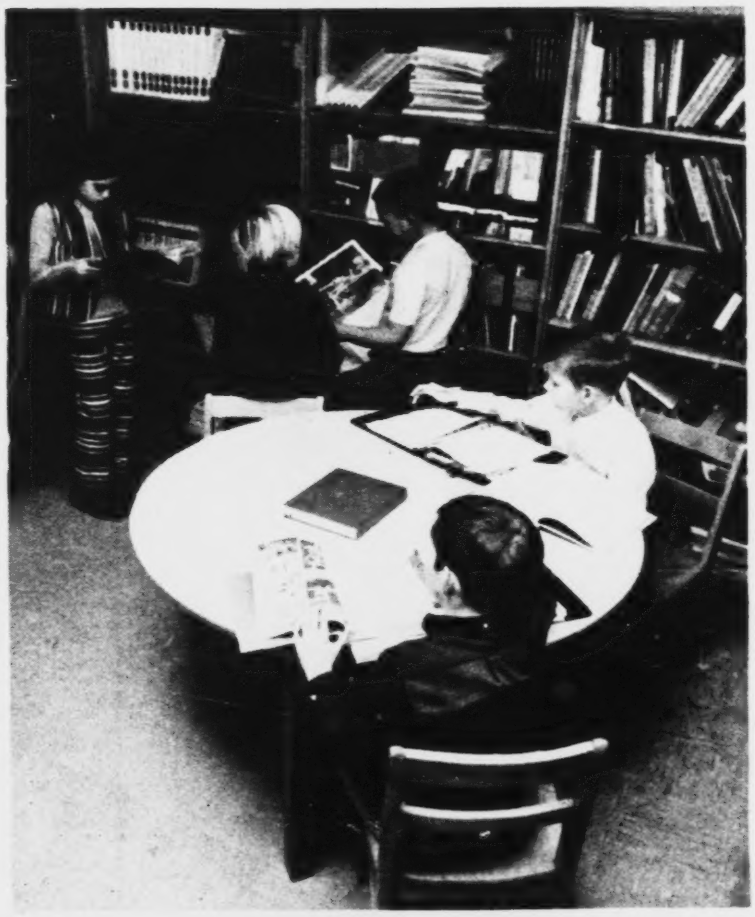
The objectives of the Grey Culbreth Learning Center are to provide students with the motivation, materials, and design and production skills for development of well-defined academic research projects; to provide in-service training and supervision for local production activities; to collect and organize materials for independent study and for instructional materials production; to provide a small collection of pre-package skill building materials; to provide "feed-back" to the classroom teacher regarding a student's progress in Learning Center; and to encourage students to initiate their own areas of study, to teach them good research skills, and to guide them in fulfilling their goals.

The Learning Center will be staffed by two teachers, Margaret Brown and Jim Handy, who will provide counsel and guidance to those students working on independent study projects and supervise the production of aduio-visual materials to be used in the presentation of a student's project.

A student is using the Micro-film reader at Chapel Hill High.



Third grade students at Estes Hills Elementary School enjoy creative dramatics through puppetry.



CREATIVE DRAMATICS

Creative drama is an expanding experience.

Creative drama is used to create situations in which students and teachers strip away the layers of defense mechanisms which have been acquired and reveal to themselves and to other people a more complete self.

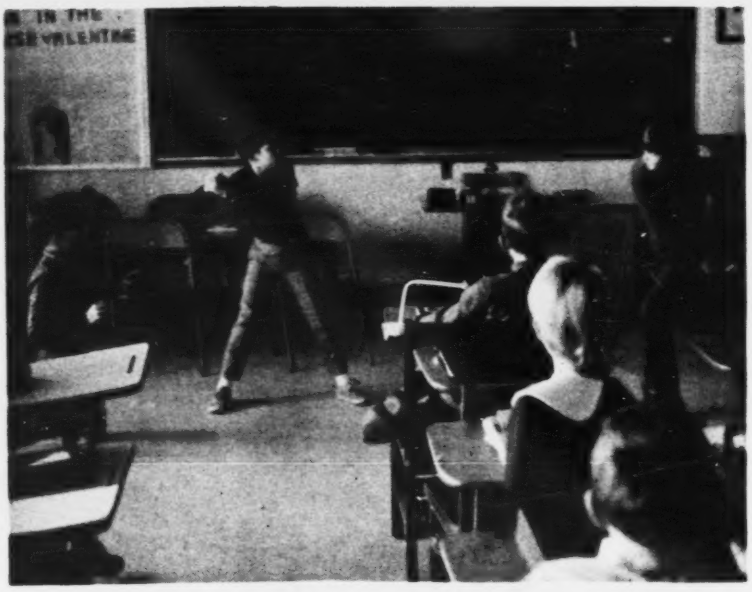
In workshop situations led by Mrs. Joan Tetel, teachers are presented with sequential development, a series of techniques (creative drama methodology which translates ideas into the dramatic form) that the teacher can apply in the classroom. This process should lead to greater rapport with students and success in role-playing (or socio-drama) pursuits. A typical workshop series would include techniques in pantomimes of emotions and moods; emphasis upon the hands; assumption of the role of a member of the family; pantomime for two people, and the addition of dialogue.

Imagine a junior high school student who in a pantomime is able to move only with the assistance of grandfather's cane or with the limitations of baby's wobbly steps; or a junior high girl who may not be free to drop her books on the nearest bit of floor and blast on the record player to begin dancing, but again face the kitchen and another meal preparation like her mother

Imagine a teacher who is free enough to pantomime for his class a recalcitrant six-year old who does not want to go to school.

From these seemingly simple portrayals should come deeper comprehension of other people, their freedoms, limitations and responsibilities. And with comprehension comes insight and, hopefully, an ability to communicate more effectively.

One specific goal of the creative drama workshop was to break down the reserves and inhibitions of teachers and create an atmosphere where open exchange and exploration of professional feelings and attitudes are explored and shared via discussion and spontaneous dramatizations. This, in turn, would allow the teacher to become more willing to expand his own concept of his role as a teacher for himself and his students--to effect more meaningful communication in the classrooms.



Acting out a short skit is also part of creative dramatics in the 5th grade at Estes Hills School.

FROM THE SUPERINTENDENT

How to provide students with classroom activities that will result in the most learning has always been a prominent concern for educators throughout history.

Two years ago, selected teachers in the Chapel Hill Schools, meeting in Task Forces to propose improvements, almost unanimously agreed that better methods of teaching were needed to accommodate the wide variations in student abilities and interest. Grouping together students of similar abilities and interests had been the main response to individual differences. While it was better than trying to teach all students the same thing at the same time, grouping was not effective enough. To provide for individual differences each student needed some learning activities planned specifically for his needs.

Out of the Task Force Reports and out of a wide variety of efforts by teachers in Chapel Hill, a philosophy of individualized instruction emerged. To implement the philosophy, a large Federal Grant was secured that provided teachers the time to begin developing programs of procedures and materials to be used by students on an individual basis.

At this time, there is no system-wide "program." There are actually dozens of different programs at various grade levels and in various subjects. In many elementary classrooms, students are engaged in individualized reading activities for part of their reading instruction, but textbooks and "reading groups" are also used. Independent study in the Senior High is an outgrowth of this philosophy. As a school system, we have adopted a philosophy and are providing teachers some resources to implement the philosophy. How individualized instruction is used, however, is the prerogative of the classroom teacher.

Our goal is to gradually work out a "model" for individualized instruction that will be based on specific written learning objectives, rather than textbooks. The ability and knowledge of each student will be diagnosed by a variety of testing methods. From the diagnosis will come a decision of what the student should learn next, followed by a prescription for how he should go about learning it. At the end of the learning activity, the student would be evaluated and the diagnosis would start the cycle again.

There are, of course, many goals of education that cannot be reached by students in individualized activities. Some of our more important goals result only from students working together. Individualizing parts of the instructional program, however, is a major step forward in the education of our young people.

Wilmer S. Cody

Mrs. Rosanne Howard works with a junior high student in the reading program at Guy B. Phillips School. This unique program involves volunteer adults from the community who have been trained to tutor students in reading.

SPECIAL READING PROGRAM AT THE JUNIOR HIGH

What do these three people have in common?

John Macfie is a retired gentleman who has lived in Chapel Hill only six months. He has three grown children. Linda Rabinowitz is the mother of one child who is one year of age. Her husband is a rabbi and is the Hillel director at the University of North Carolina. The Rabinowitz family has been in Chapel Hill for five years. Mrs. Ernest Craige has lived in Chapel Hill for sixteen years. Mrs. Craige is the mother of four children ranging in age from sixteen to twenty-two.

These three people are tutors in a reading skills program which is being offered to a limited number of junior high students for the spring semester.

Acting on requests by teachers and guidance counselors, EPDA enrichment teachers have designed a reading program which offers tutorial assistance in reading skills. The purpose of the program is to raise the reading level of pupils with reading disabilities.

A reading disability exists when there is a significant discrepancy between a student's intellectual potential and his actual reading level. In other words, the student who is best able to respond to remedial reading instruction would have at least normal intelligence. He simply, somewhere along the way, fell behind normal expectations in reading accomplishments. He might be reading at third or fourth grade level even though he is in the seventh grade.

A list of potential candidates for the reading program was compiled from teacher and counselor suggestions and a search of cumulative folders. Standardized tests were administered to the candidates and a refined list of candidates who met the prestated criteria was determined. Each student is given the option of not participating in the program.

Students who elect to participate in the reading program will be tested for visual and auditory skills which keep a child from reading successfully. They will also be given the Durrell Analysis of Reading Difficulty which will indicate weaknesses and faulty habits in reading which may be corrected in a remedial program.

Each student is assigned to a tutor. Working on a daily one-to-one basis, the student and tutor will attempt to raise the student's reading level.

Approximately sixty-five tutors have been trained by Dr. Carl Brown of the UNC School of Education for this program which is an exciting cooperative effort by volunteers from the community in response to an expressed need, personnel in the Chapel Hill City Schools, and university personnel and students.

WHAT IS A LAP ?

What is a LAP? Read the following lesson segment of an instructional program which was developed at Ruby S. Thomas Elementary School in Las Vegas, Nevada.

"Lesson B-6A: Ho Chi Mihn

A. Objective:

In this lesson you are an illustrator of books. You are going to draw a series of pictures, like a comic book, showing the life of North Vietnam's leader Ho Chi Mihn. Be sure the pictures include the following:

1. his life history (where and when he was born and events which had a serious influence on his thinking);
2. the part of the world in which he lives;
3. how his actions were influenced by the times and places in which he lived; and
4. the actual changes he made in the world and people around him."

The instructional objective of this lesson is followed by an introduction to the lesson; activities on how to learn the objectives; suggested references; self-test and post-test based on the instructional objective and quest suggestions for further study.

The study on Ho Chi Mihn is one of six lessons included in the LAP, "Vietnam: A Horizontal Study of its Colonial Past and its Problematic Present."

A LAP (Learning Activities Package) is a program of study in printed package form that covers a particular subject to be taught and is organized around a logical sequence of instructional objectives and activities implementing these objectives. The student may proceed through his individual LAP at his own pace and may work with it in his independent study time.

The LAP concept (1) gives the student responsibility for his learning to a greater degree than traditional teaching; (2) allows the student to proceed at his own pace and promotes self-planning of time usage; (3) permits the student to see exactly what he is learning and why he is learning it; (4) makes homework a school activity, where the necessary help of teachers and resources is available; (5) frees the teacher for one-to-one tutoring; (6) allows the teacher to be a true professional in his discipline through research and scholarship, and (7) gives direction and purpose to the planning of curriculum--both what is to be taught and how it is best taught.

The LAP concept is an exciting one. Properly used (which involves proper planning and organization, both on the part of the teacher and the student), it can greatly enhance learning and create a more profitable work atmosphere for students and teachers.

FOCUS ON PROGRESS

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Chapel Hill City Schools
400 School Lane
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